SEPTEMBER 25, 1961

PAPER TRADE JOURNAL

Air Dryers on New Dutch Machine Eliminate Dryer Felts

Oxford Expands Pulp Capacity and Completes Switch to Kraft

BDSA Report Shows Optimistic Outlook for Rest of Year

Contents of the Week, pages 4-5

NEW COATING COLOR SCREEN:

CLOSED SYSTEM SAVES MONEY

For screening high solids coating color, Patton's new "Z Screen" can bring outstanding advantages to your color plant. First, screening is accomplished under pressure. Since the color is not exposed to air, there is no aeration or dry color buildup. Second, the color itself is vibrated while the screen element remains stationary. It cuts your maintenance bill, prevents loss of color. Third, we believe that the money you save on color alone will pay for the screen in a few months. "Z Screens" in production are doing that . . . and more. Like most good ideas, this one is simple too.

Write for bulletin Z-1 and rental-purchase details.

PATTON

THE PATTON MANUFACTURING CO., SPRINGFIELD 8, OHIO

Editorial Dept.
University Microfilms, Inc.
313 N. First St.
Ann Arbor, Mich.

Just out! a definitive book about calender rolls

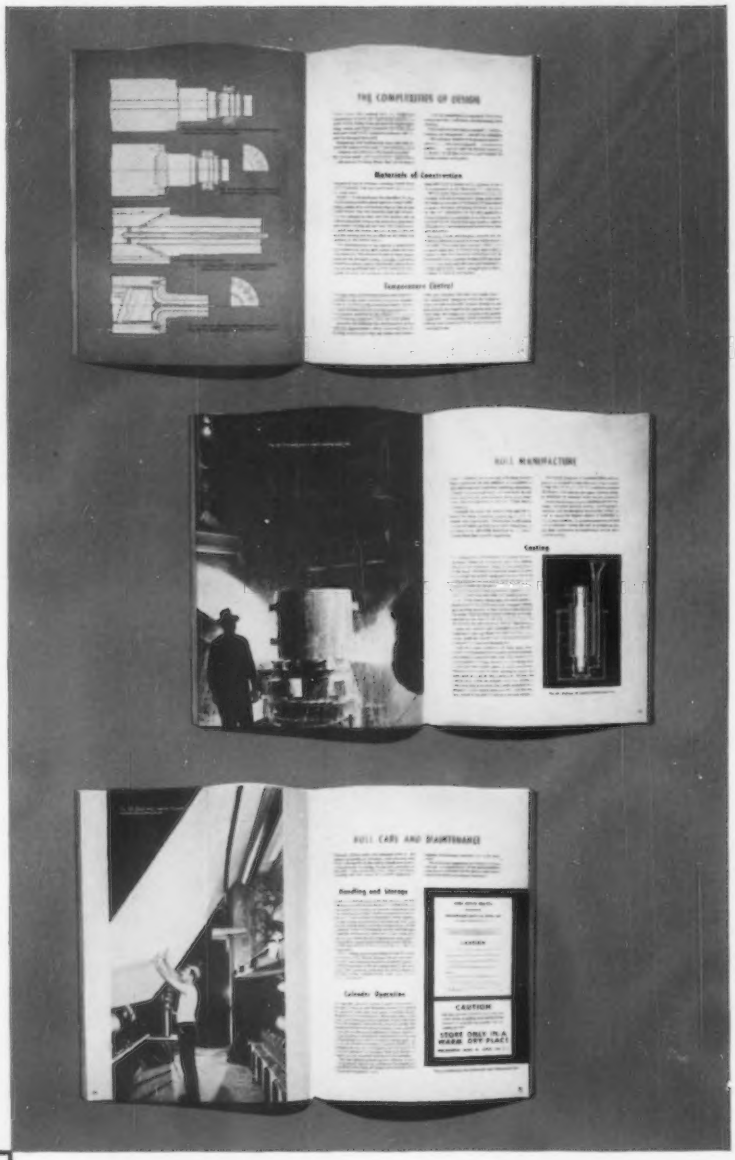
From the *world's largest specialty roll shop* comes this informative 32-page book. Far more than a catalog, it provides a great deal of information needed for intelligent selection and maintenance of calender rolls. It is divided into sections as follows:

THE COMPLEXITIES OF DESIGN
This chapter deals with the various aspects of roll design as affected by the individual application. Written in collaboration with Farrel engineers it discusses thoroughly such subjects as type of material, temperature control, procedure for determining roll crown, etc. Required reading for buyers and engineers.

ROLL MANUFACTURE
If you've ever wondered what type of facilities and machinery go into the making of fine calender rolls, this section should be illuminating. Casting, machining, grinding and final testing operations are described in concise language, dramatically illustrated.

CARE AND MAINTENANCE
Maintenance men will benefit from the material given here. Tells you how to preserve the initial precision of Farrel rolls and considers factors like handling and storage, calender operation and lubrication. Discusses roll failure . . . pitting, spalling, denting, scoring and so on . . . and suggests possible causes.

Simply ask for bulletin 123.



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at LOWE PAPER CO., Ridgefield, N. J.,
famous makers of coated boxboard.

Defective sheets are sorted out of the shipping pile by a semi-automatic inspection system and a dual layboy with reject gate.

SYNCHRO-FLY® SHEET CUTTER

Distinct from conventional equipment, the "SYNCHRO-FLY"

- cuts heavy multiple webs where other cutters fail
- cuts clean, sharp, cliff-like edges without fuzz
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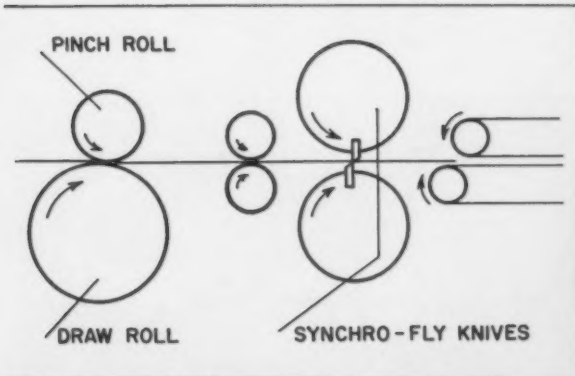
- reduces knife changes (once a year or less)
- needs no angle corrections for sheet squaring
- operates in whispering silence.

How is this achieved? The "SYNCHRO-FLY" has no bed knife. Both knives rotate and meet the web at its exact own speed, regardless of sheet length. The web travels through the cutter in a straight line. Highest accuracy is guaranteed by use of fully enclosed, centrally lubricated precision gears and specially designed PIVs.

For full information contact

JAGENBERG USA, INC., 300 Park Avenue South, New York 10, N.Y.

In Canada: JAGENBERG OF CANADA LTD., 209 Davenport Rd., Toronto 5, Canada



Schematic Diagram of "SYNCHRO-FLY" cutoff

"SYNCHRO-FLY" Knife Assembly

PAPER TRADE JOURNAL

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Week of September 25, 1961
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FEATURED THIS WEEK

New Air System Permits Machine Operation Without Dryer Felts

High velocity air dryer-hoods offer many advantages on new Yankee combination machine at Dutch mill. They reduced capital cost of machine, required less machine space and give better control of drying—Ernest F. Barker **24**

Exit Sulphite, Enter Softwood Kraft as Oxford Winds Up Pulp Mill Expansion

Improvements consist of new bleached softwood kraft mill including a Kamyr continuous digester plus expansion of over 30 per cent in bleached hardwood kraft pulp production at Oxford Paper's Rumford, Me., mill. **30**

Broad Picture Shows Rising Output, Increased Exports and Labor Peace—W. LeRoy Neubrech

Overall picture—Raw material inventories at ten year low—Paper and board production at record levels—Exports reach an all time high **36**

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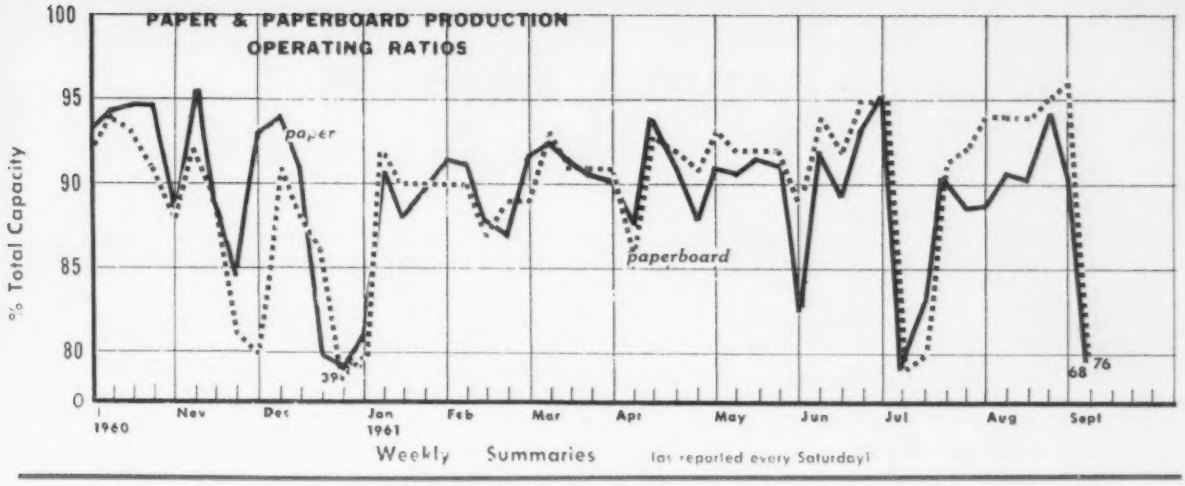

NEWS OF THE WEEK

Wausau Completes Expansion, New Machine in Production . . . McCabe Discloses New Scott Affiliate in Japan . . . United Changes Bicking Paper Mill Name . . . NVF Purchases La Fibre Francaise

Three Added to Bowaters E&D Board . . . Crown Zellerbach Advances Gianotti . . . Boyd Joins Oxford Eastern Sales Staff . . . Noranda Names Manager for Research Center . . . Westvaco Promotes Three at Covington . . . . . .

G-P Enters Multi-Wall Paper Bag Field . . . Hufford Succeeds Kepner At Kansas H&D Plant . . . H. J. Mills Elects New President . . . Spalding Steps Up to New O-I Managerial Post . . . Nashua Names Gen. Mgr., Package Sealing Division . . . .

Trends *13*

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Paper People *18*

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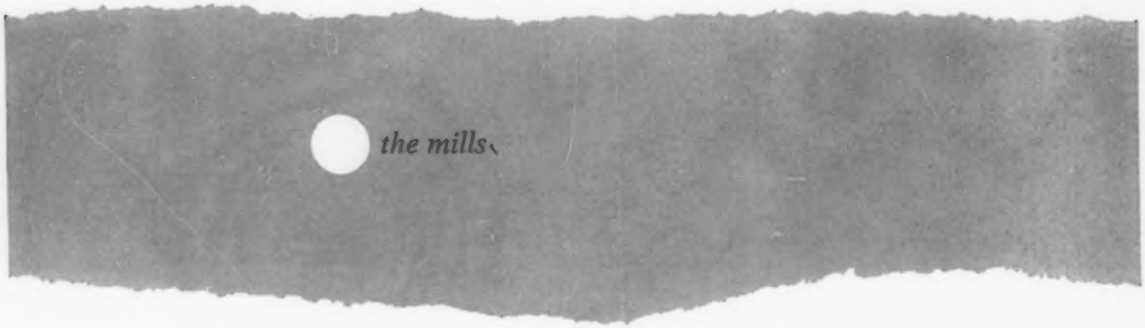
REMEMBER THESE DATES

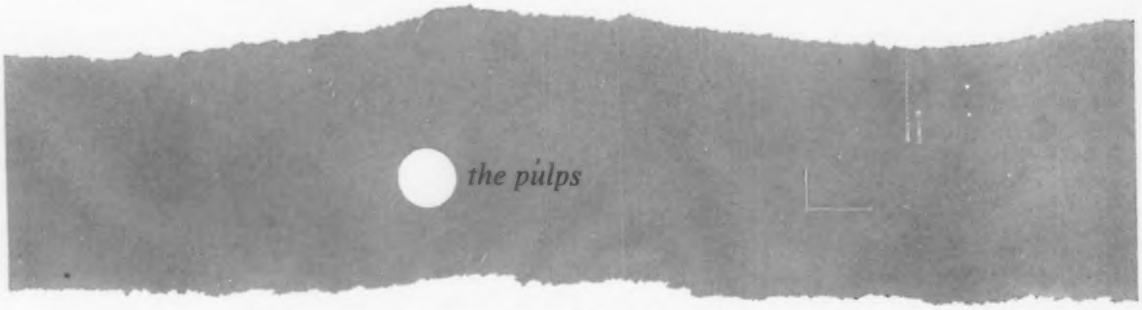
Deinking Conference, Hotel Harris, Kalamazoo, Mich.	OCTOBER 5-6
Plastics Paper Conference, French Lick Sheraton Hotel, French Lick, Ind.	OCTOBER 9-11
Annual Meeting, Fibre Box Assn., Waldorf-Astoria Hotel, New York City, New York.	OCTOBER 10-11
Engineering Conference, Shoreham Hotel, Washington, D. C.	OCTOBER 15-19
Alkaline Pulping Conference, Rice Hotel, Houston, Texas	NOVEMBER 1-3

MONTMORENCY

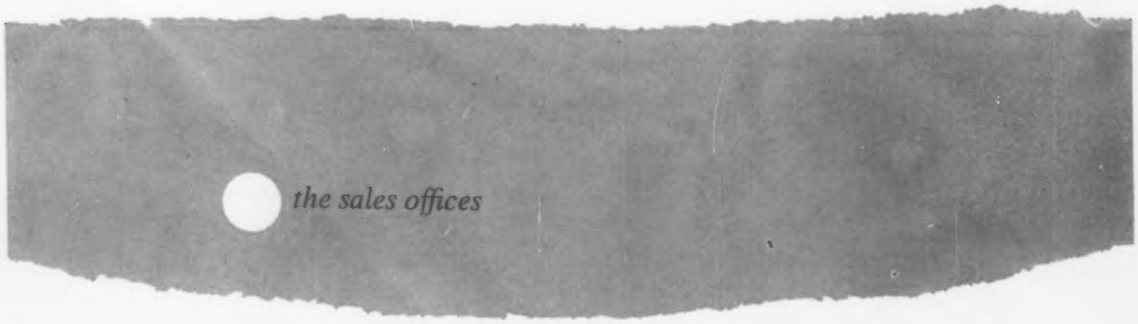
the mills
the pulps
the sales offices



Anglo-Canadian Pulp and Paper Mills, Ltd., Quebec, P.Q., Canada, produces 80 tons of boxboard, 200 tons of pulp and 1,000 tons of newsprint *a day*.
Dryden Paper Company, Limited, Dryden, Ontario, produces 400 tons of pulp and 180 tons of bleached and unbleached kraft paper and board *a day*.



- Anglo-Canadian WONDERCHIP unbleached sulphite
- Dryden bleached kraft
- Dryden unbleached kraft
- Dryden specialty krafts (semi-bleached, condenser, photographic, anti-tarnish, etc.)



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- Prevents condensation... dripping from roof onto equipment and paper rolls
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- Protects Equipment
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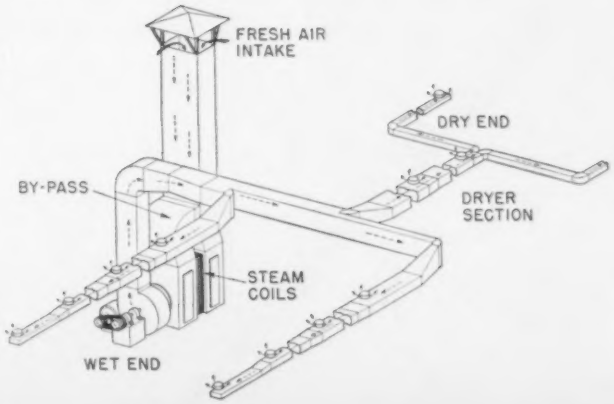
- No increase in fuel requirements

Ask a Black-Clawson Air Systems engineer to give you more facts. You'll be assured of fast, competent service.



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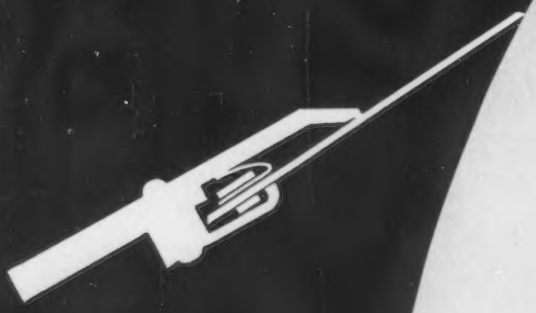
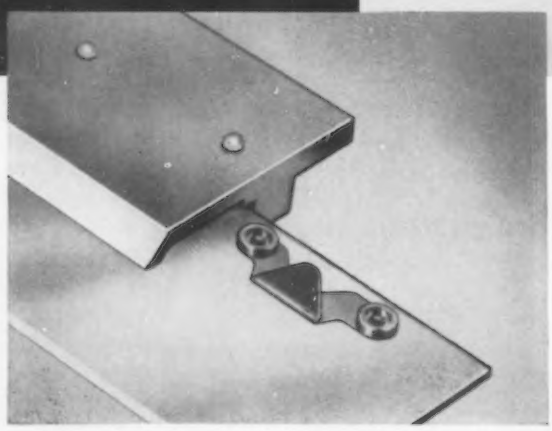
Lodding Doctor Blades *have been "through the mill"*





Lodding puts every doctor blade through the mill before it reaches you. And in paper mills throughout the world, there are Lodding Blades in every doctoring operation. Figuratively and literally, Lodding Doctor Blades have been "through the mill."

But blades alone are no guarantee of effective doctoring. This is achieved only through experience in the design, manufacture and assembly of *all* doctor components. And no other manufacturer has more experience than Lodding in the design and manufacture of doctors for every application and operating condition. Our more than 30 years of specialization in the field of doctoring is your assurance that when you order doctors or replacement blades from Lodding, you're getting the best that are available.

Lodding Doctor Blades can be supplied in HIGH CARBON STEEL, STAINLESS STEEL, K MONEL, PHOSPHOR BRONZE, or in a wide variety of LAMINATED PLASTIC, THERMO PLASTIC or ABRASIVE materials — whatever is best suited for your particular requirements.

BLADE SURVEY SERVICE

Without charge, a Lodding representative will conduct a complete study of all your doctoring applications and make specific recommendations on blade materials and on operating procedures. Generally, when mills have taken advantage of this service, it has resulted in greater operating efficiency and economy. You, too, can profit from Lodding's 30 years of specialized experience. Call or write your nearest Lodding sales representative for details.

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FRACTIONAL HORSEPOWER

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Steps up Reliability and Durability

New in design but a veteran of proven dependability, the Eaton-Dynamatic Fractional HP Ajusto-Spede Drive offers a compact, low cost solution to adjustable speed control problems. Improvements include:

- **Longer operating life**
- **More uniform cooling**
- **Less noise and vibration**
- **Lighter weight**
- **Compact design**

The Ajusto-Spede Drive offers advantages not found in other methods of control. It is low in cost and easily installed. It is an integral combination of AC constant speed induction motor, eddy-current couplings, and single tube, electronic control. Special control functions, such as acceleration, inching, threading, cascading of multiple units, follower operation, constant tension and clutch motor operation can be provided by remotely mounted electronic controls.

Ajusto-Spede Drives operate on standard 115/230 volt, single phase, 60 cycle or 220/440 volt, 3 phase, 60 cycle alternating current. No special power source is required. Available from the manufacturer or from your nearest Dynamatic Distributor in sizes of ¼, ½, and ¾ HP at 1600 RPM and ½, ¾, and 1 HP at 3200 RPM. Can be supplied with either of two types of electromagnetic friction brakes and integral speed reducer in a wide variety of gear ratios.

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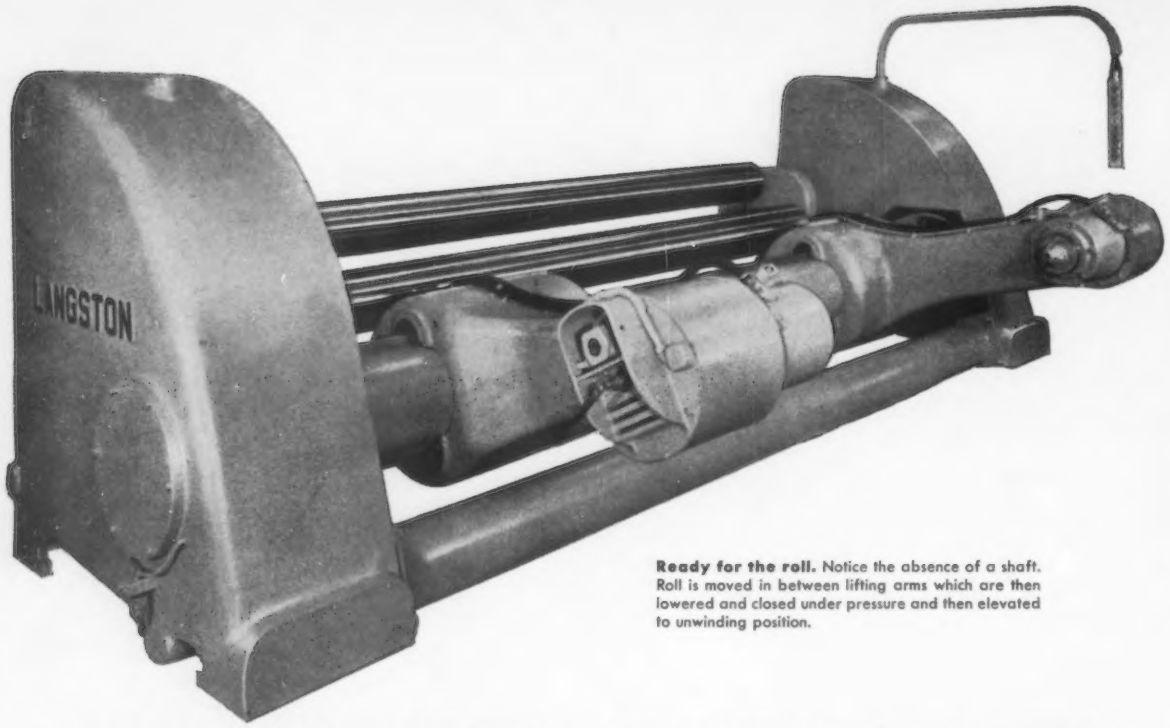
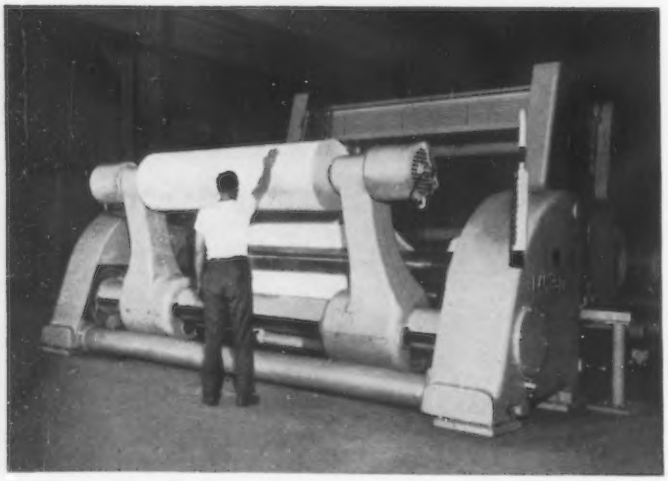


Ready for the roll. Notice the absence of a shaft. Roll is moved in between lifting arms which are then lowered and closed under pressure and then elevated to unwinding position.

LANGSTON SHAFTLESS UNWIND STAND

Boost your production . . . reduce your slitting and rewinding costs



Easy, fast, completely safe. One man does everything. Operating pushbutton controls, he closes lifting arms, elevates roll, sets brakes.

One man can load the heaviest roll. No heavy shaft to handle. No cone tightening. No couplings to engage. No crane lifting. Just pushbuttons. This is the Langston shaftless unwind stand for rewinding and converting applications.

You not only save time, you also get better unwinding. Roll can be positioned laterally by pushbutton control—even when the machine is running. It's held firmly under pressure for complete safety throughout the unwind. Several braking arrangements can be provided to handle a wide range of grades and conditions. Available extras provide for handling very narrow rolls; for constant tensioning; for automatic braking of idler rolls; for automatic web alignment and side register control; for web oscillation; and for local or remote control.

This new Langston shaftless unwind stand can be used with any make of slitter. Available for maximum roll widths up to 140 in. and diameters to 84 in. For complete information, write Samuel M. Langston Co., Camden 4, N. J.

Langston *LEADERSHIP . . . BY DESIGN*

Trends

Exports Reach an All Time High

U. S. exports of pulp, paper, paperboard and converted products in the first eight months of this year stood at a new high. The U. S. industry, while maintaining its position in established markets, especially western Europe, has succeeded in opening new markets, both geographically and with respect to product diversification. See the report in this issue for further details.

Multi-Walls Joining Parade to Higher Prices

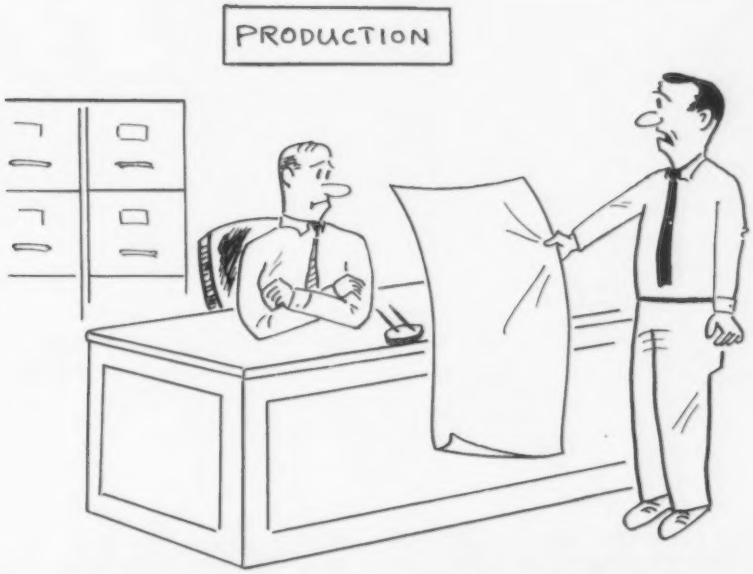
The recent pattern of price increases for kraft papers and products continues with announcements by some manufacturers that multi-wall bag prices are being raised a few per cent.

Waste Paper Market Continues Active

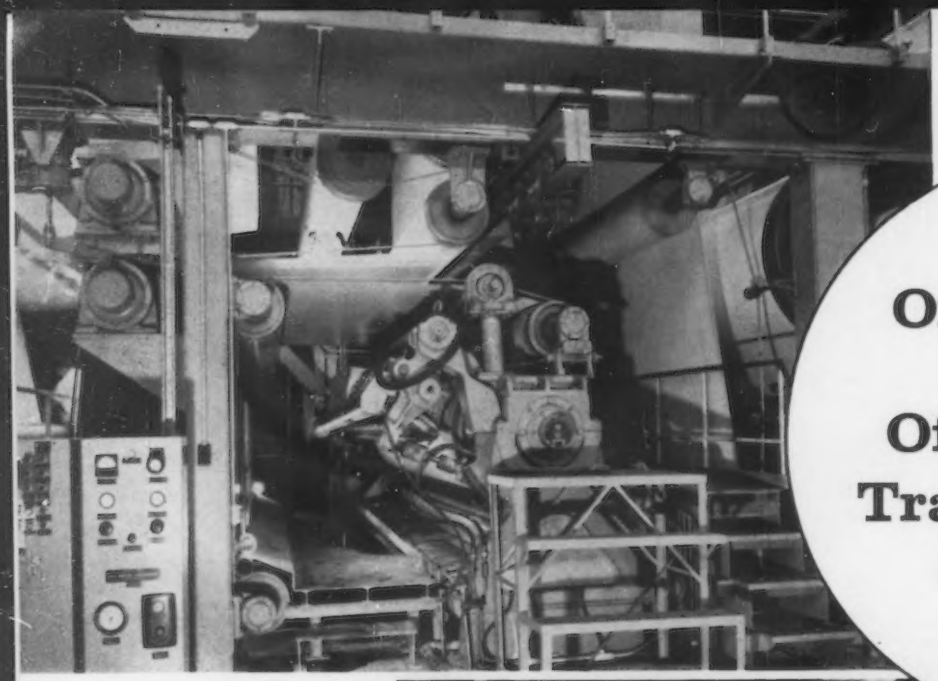
The waste paper market following general business remains active. Available supplies are said to be sufficient but there is little excess available.

Folding Boxes Catching Up

Shipments of folding cartons set a record pace in August, it was announced by the Folding Paper Box Association. Dollar volume of shipments was up 3% over August 1960 and tonnage was up 2.1% from the same period. Volume for eight months this year is now only 1.1% below 1960, while tonnage of shipments trails last year by 1.3%.



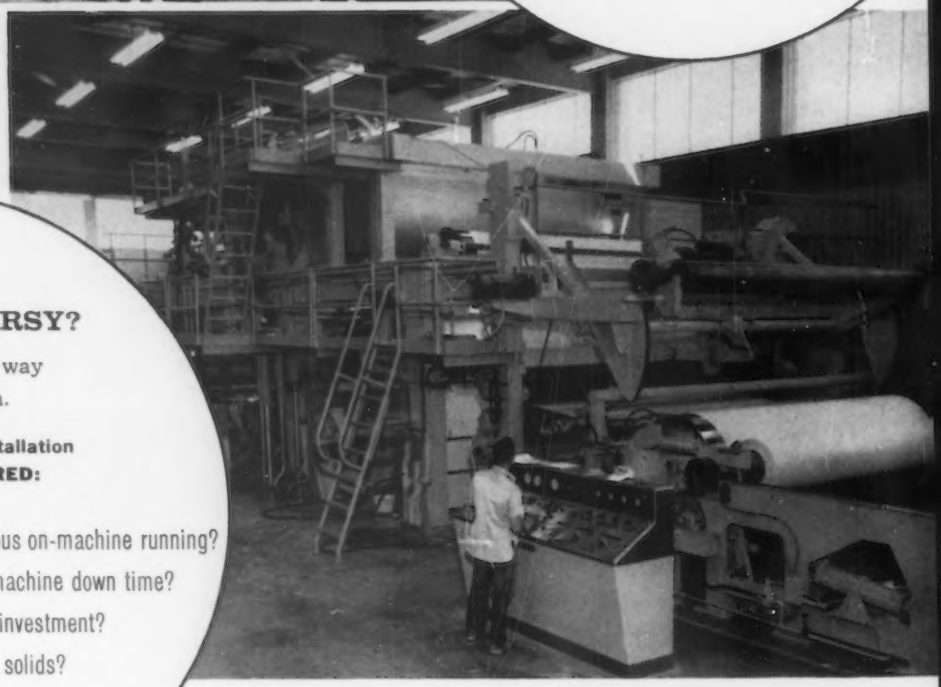
"Yeah—it's 50 lb. stock, 40 lb. on one end, 60 lb. on the other end."



On-Machine OR Off-Machine Trailing Blade Coating?

Crossett Paper Mills,
Crossett, Arkansas

Blandin Paper Co.,
Grand Rapids, Minnesota



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Production gains	VS	paper machine down time?
Labor costs	VS	capital investment?
Coat weight control	VS	coating solids?

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PJT PAPER TRADE JOURNAL

WEEK OF SEPTEMBER 25, 1961

Wausau Completes Expansion, New Paper Machine in Production

An extensive expansion program at Wausau Paper Mills Co., Brokaw, Wis., has just been completed. Main objective of the project which was started in April 1959 was to increase the firm's fine paper capacity from 125 tons to some 235 tons daily to comply with increased demands.

The project included the installation of a new paper machine, named "The D. B. Smith—110," as well as a building addition and equipment for new finishing and shipping facilities which nearly triple previous facilities. The new machine is a 124-inch Beloit fourdrinier trimming 110 inches and operating at speeds up to 1500 f.p.m. It is designed to produce up to 110 tons of fine paper daily in weights from lightweight register bonds to heavyweight index bristols.

Finishing, assembly and shipping operations are housed in a new 100,000 square foot addition. New equipment includes two sheeters and electronically controlled trimmers.

McCabe Discloses New Scott Affiliate in Japan

Scott Paper Co. has announced that it has agreed with a Japanese company to form a new affiliate in Japan, called Sanyo-Scott Co., Ltd., for the manufacture and sale of sanitary paper products.

Thomas B. McCabe, president of Scott, disclosed the company's latest foreign expansion—its first enterprise in Japan—at the dedication of the company's new executive offices and research and engineering center in Philadelphia last week.

The new Japanese company will be capitalized at $3,000,000 with Scott subscribing to half of the common stock and Sanyo Pulp Co., Ltd., a leading Japanese pulp and paper manufacturer, subscribing to the remainder.

Scott and Sanyo will each have three members on the board of directors of the new company. Its president will be Tsunekazu Namba who also serves as president of Sanyo Pulp Co., Ltd. Sanyo will provide Japanese employes to fill virtually all production and administrative jobs in the new company, while Scott will supply the technical advisers, engineers and marketing experts.

Sanyo-Scott will build a new paper mill with necessary converting equipment at a site just outside Tokyo. Plans for the new mill are being prepared and it is expected that construction will begin shortly. The new company will have access to Scott's technical, manufacturing and marketing experience. Products of the kind and quality produced by Scott in the United States will be made by the new Japanese affiliate and marketed under Scott trademarks.

United Changes Bicking Paper Mill Name

E. H. Kardon, executive vice president of United Container Co. has announced that the name of Bicking Paper Mill, Downingtown, Pa., will be changed on October 1 to the Downingtown plant of Daring Paper Mill. The Bicking mill was purchased by United Container Co. in August 1960, and has been operated as a division of that company.

The present Daring Paper Mill in Bridgeport, Pa., will continue to operate as the Bridgeport plant of Daring Paper Mill. This mill began operation in 1920, was purchased by the Kardon family in 1950, and operated independently until it became a division of United Container Co., 56th & Lancaster Avenue, Philadelphia, Pa., in October 1960.

Mr. Kardon stated that $350,000.00 has been spent at the Bicking mill to modify the equipment so that compatible grades of board could be produced at both of these mills with a maximum trim of 73 inches at Bridgeport and 84 inches at Downingtown. The mills are currently producing all grades of tubing, folding, set-up and chipboard, as well as a complete line of liners including kraft filled, mottled "Dar-a-White" and specialties.

The two plants of Daring Paper Mill under the direction of Frank J. Keating, vice president, mill operations, will continue to be operated as a division of United Container Co. and maintain separate offices in both Downingtown and Bridgeport, Pa.

NVF Purchases La Fibre Francaise

The acquisition of La Fibre Francaise, Yvours Irigny, France, has been announced by Eugene R. Perry, president of National Vulcanized Fibre Co. Mr. Perry said National had exercised its option and effected the acquisition of the French company by purchase of more than 85 per cent of its stock.

The board of directors of La Fibre Francaise has named Claude Germain president and general manager of the company. Mr. Germain was general manager of the predecessor organization.

National Vulcanized Fibre Company is a manufacturer of vulcanized fiber and a producer of industrial laminated plastics, materials handling units, textile bobbins, and fine business papers. Another recent acquisition is the Parsons Paper Co., manufacturer of writing papers. La Fibre Francaise will function as a French subsidiary of the American firm, helping them to manufacture and sell in the EEC.

Standing, left to right: Fred Herbolzheimer, Thilmandy Pulp and Paper Co., Finnish Ambassador Seppala, David F. Pollard, Great Northern Paper Co., C. E. Flander, Madden Corporation, Harold F. Zigmund, Blandin Paper Company, William J. Shelton, Georgia-Pacific Paper Co., C. T. Clark, Fraser Companies, Ltd., William W. Stuart, Hudson Pulp & Paper Company. Not present for the picture are: Loren V. Forman, Scott Paper Company and Harold Annis, Oxford Paper Company.

American Papermakers Visit Finnish Mills

The Finnish Paper Mills' Association has welcomed a delegation representing leading American pulp and paper companies for a two-week tour. The American group was organized by The Madden Corp. and its affiliated companies who are the American representatives of The Finnish Paper Mills Association.

These officials are meeting with similar Finnish pulp and paper industry leaders for technical discussions and a tour of inspection of leading Finnish mills. The tour will include visits to the mills of: Enso-Gutzeit; United Paper Mills Ltd.; Kymmene; Tampella; Myllykoski; W. Rosenlew and G. A. Serlachius. Also, a visit will be made to the Finnish Pulp and Paper Research Institute. On this occasion the American visitors will be acquainted with the research now being conducted in Finland.

This is the second group visit of this kind to Finland. In 1959 a group of eight officials visited Finland for the same purpose. The American group departed September 8th from New York City and will stay in Finland for two weeks returning Saturday, September 23rd.

IPC Elects Trustees at Annual Meeting

Elections for the board of trustees took place at the 32nd Annual Meeting of the membership of The Institute of Paper Chemistry held September 12 at Appleton, Wis.

The elections filled six positions on the board made vacant by normally expiring terms. Also filled was the position of senior trustee made vacant by the resignation of W. Irving Osborne, Jr., effective with the meeting.

Elected as senior trustees were D. K. Brown, founding trustee, Neenah, Wis.; George Olmstead, Jr., president of S. D. Warren Co.; and Ernst Mahler, Neenah, Wis. Elected a senior trustee for the unexpired term of Mr. Osborne was R. C. Doane, president, International Paper Co., formerly a term trustee.

Elected as term trustees were Maxwell D. Bardeen, president, Simpson Lee Paper Co.; Robert Faegre, president, Minnesota and Ontario Paper Co.; and Howard Morgan, vice president, Weyerhaeuser Co., to the unexpired term of Mr. Doane.

Elected as nominee of Lawrence College, Appleton, Wis., for the position of ex officio trustee was Karl Stansbury, former chairman of the board of Thilmany Pulp and Paper Co.

Brown Moves Head Offices To New York

The executive and general sales offices of Brown Co., will be moved to New York City at the end of September. The offices are presently located at 150 Causeway Street in Boston, and the company has maintained a branch sales office at 500 Fifth Avenue, N. Y.

Location of the company's new headquarters will be 733 Third Avenue at 46th Street. The company will occupy most of the 10th floor, the announcement stated. Brown Company will continue to maintain a regional sales office in Boston.

Mead Plans Purchase Of Denver Firm

Lester A. Dixon, president of the Dixon Paper Co. in Denver revealed that the Mead Corp. of Dayton, Ohio, is purchasing his paper distributing company, together with some buildings, in a $3,720,000 transaction.

Mead, he disclosed, will buy eight buildings for $1,800,000 in cash. Two of them are in Denver, the others—owned by the related Dixon Property Company—are in Salt Lake City, Billings, Mont., Albuquerque, N. M., Boise, Idaho, El Paso, Texas and Pueblo, Colo.

In addition, he said, Dixon stockholders will receive 48,000 shares of Mead Corp. stock valued at $40 a share and equal to $1,920,000.

Paper and Paperboard Production

The American Paper and Pulp Association reported the ratio of the United States paper production to mill capacity for the holiday week ending September 9, 1961, at 67.9 per cent, compared with 89.1 per cent, revised, for the preceding week. The ratio was 73.1 per cent for the corresponding week a year ago.

The National Paperboard Association reported the paperboard production ratio for the holiday week ending September 9, 1961, at 76 per cent, compared with 96 per cent for the preceding week and 70 per cent for the corresponding week a year ago.

(Detailed Statistics on page 56)

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PAPER PEOPLE

T. C. Bannister, Jr.

R. B. Reed

Three Added to Bowaters E&D Board

T. C. Bannister, Jr., R. Bruce Reid and George C. Davis have been elected to the Board of Directors of Bowaters Engineering and Development Inc., Calhoun, Tenn.

Mr. Bannister is vice president-general manager of the Bowaters Carolina Corp., Catawba, S. C., and has been a member of the Bowater Organization since 1954. A native of Alabama, he was kraft pulp mill superintendent of Bowaters Southern Paper Corp., Calhoun, Tenn., before joining Bowaters Carolina in 1956 as mill manager. In 1958, he was named general manager and in 1960, vice president.

Mr. Bannister was associated with the United States Gypsum Co., Monsanto Chemical Co. and Hollingsworth & Whitney Co. before joining Bowaters Southern.

Mr. Reid is general purchasing agent for Bowaters companies in the South.

A native of Montreal, Canada, Mr. Reid joined Bowaters Southern in 1952 as purchasing agent and was made general purchasing agent in 1957 for Bowaters Southern and Bowaters Carolina. Mr. Reid came to Bowaters from Brown Co., Berlin, N. H., where he was purchasing agent.

Mr. Davis joined Bowaters Southern in 1955 as design engineer, was later named chief draftsman and in 1957 went to Bowaters Engineering and Development Inc. as design engineer. In 1959, he was made acting chief engineer and chief engineer in 1960. Prior to joining Bowaters, Mr. Davis was associated with Coats and Clark, Inc., Albany, Ga., and, for several years, was with International Paper Co. at various locations throughout the South.

G. C. Davis

Crown Zellerbach Advances Gianotti

Wilton A. Gianotti, general superintendent of woodmill, finishing and services at Crown Zellerbach's Camas mill has been promoted, the company has announced.

Mr. Gianotti steps into the assistant resident manager's post at the St. Francisville Paper Co. mill in St. Francisville, La.

The plant is owned jointly by Crown Zellerbach Corp. and Time, Inc., and is under C-Z management.

Mr. Gianotti's position at Camas will be filled by William R. Shimmin, project engineer at Camas until December of last year when he left to fill a position elsewhere. Mr. Gianotti attended Iowa State College and graduated from the University of Washington in 1952 with a degree in civil engineering. He joined Crown Zellerbach three years later as a junior draftsman at the Port Townsend division.

The promotions took effect September 5.

St. Croix Promotes Donahue to Fin. Supt.

Neal Donahue has been promoted to finishing superintendent at the St. Croix Paper Co., Woodland, Me.

A long-time finishing department employe, Donahue has worked in that department continuously since 1942, shortly after joining the firm.

Boyd Joins Oxford Eastern Sales Staff

Andrew M. McBurney, vice president, sales, Oxford Paper Co., has announced the appointment of Harold W. Boyd to the Eastern Regional sales organization. He will be located in the New York office. Mr. Boyd's duties will include sales promotion contacts with prospective customers for the purpose of stimulating interest in the company's products, particularly in the North Star and Lawrence coated grades.

He has had wide experience in the paper industry over the past ten years. Most recently, he was regional sales manager for the Gulf States Paper Corp., Tuscaloosa, Ala. Mr. Boyd will report to Kenneth V. Wolf, Eastern Region sales manager.

Noranda Names Manager For Research Center

The Noranda Mines Group of Companies announces the appointment of W. H. Gauvin, Ph.D., as manager of Noranda's Research Center to be established near Montreal.

Educated at McGill University, Dr. Gauvin has had broad experience in the fields of electro-chemistry, heat transfer and particulate systems. Since 1951 he has served as a consultant to the Pulp and Paper Research Institute of Canada, and in 1958, was named head of the Institute's Chemical Engineering Division. Dr. Gauvin is also an associate Professor of Chemical Engineering at McGill University.

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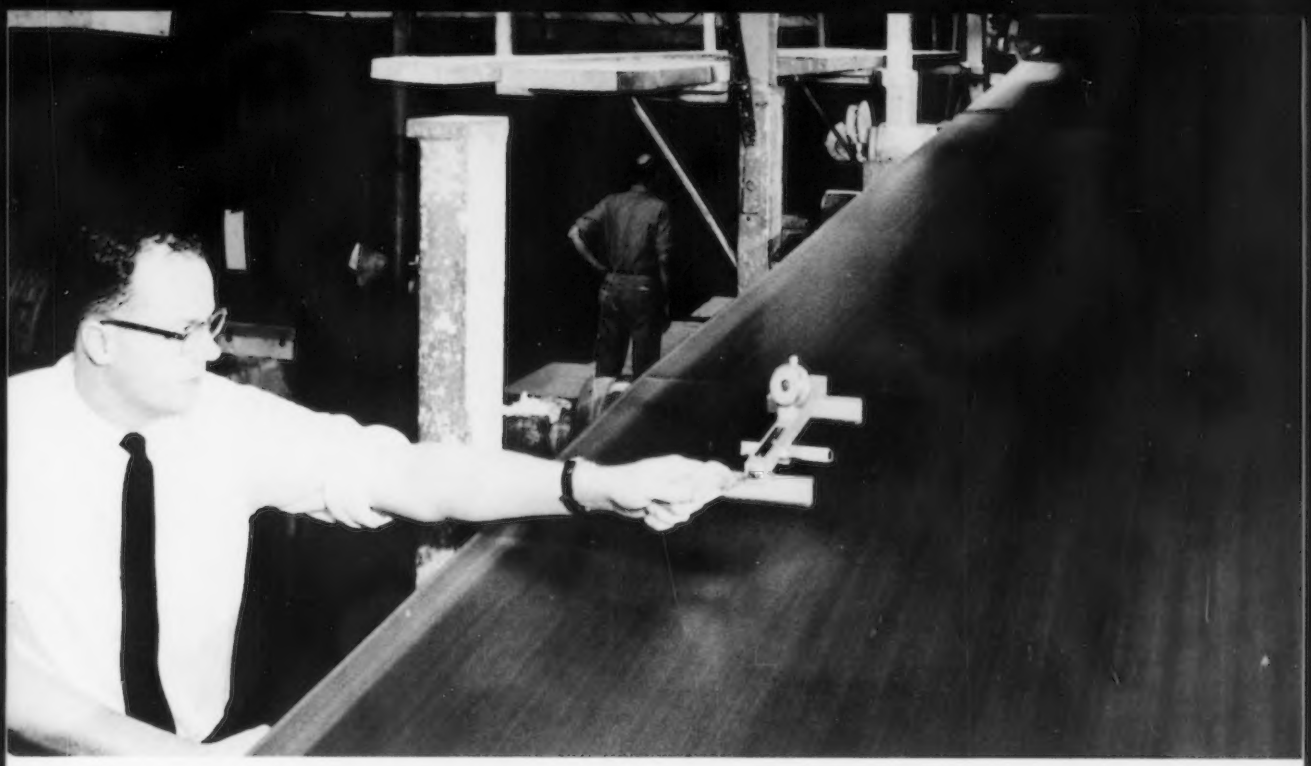

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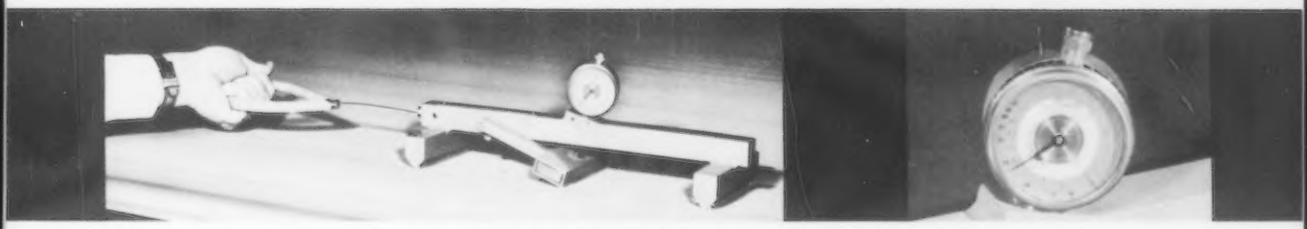

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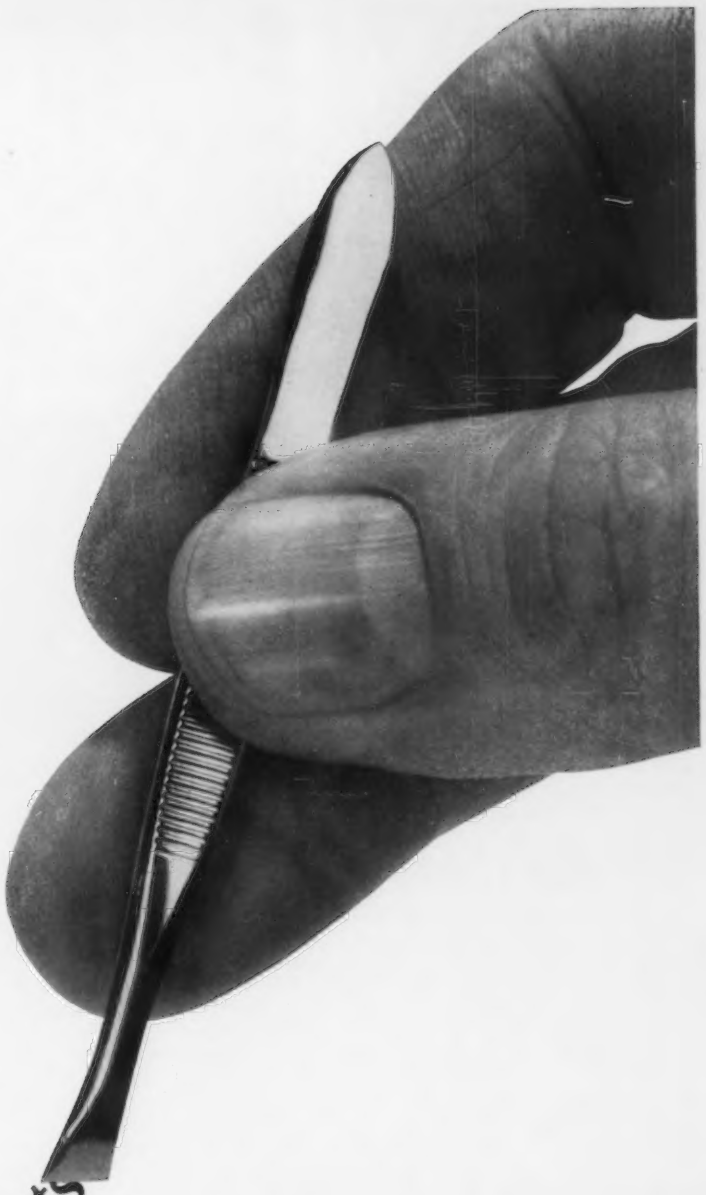

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8957

CHEMICALS DIVISION Olin

J. C. Gallatin, Jr.

P. P. Gooding

F. G. Burr

M. E. Blew

Strathmore Makes Technical Staff Changes

The Strathmore Paper Company has made the following four changes affecting technical personnel.

James C. Gallatin, Jr., has been appointed technical director of the company, succeeding Percival P. Gooding, who retired on August 31 after a 30-year career with the company. Franklin G. Burr has been appointed assistant technical director, and Maurice E. Blew has been appointed quality control manager.

On January 1, 1949, Mr. Gallatin joined the company at its Woronoco mills as a chemist. Two years later, in 1951, he was assigned to the research laboratory as a chemist, and later became chief chemist.

Mr. Blew joined Strathmore in 1931 in the West Springfield manufacturing department. A year later he was assigned to the research laboratory, and in 1949 was placed in charge of Strathmore's quality control program.

Mr. Burr became affiliated with Strathmore as a mill chemist at Woronoco in 1954. He was assigned to the research laboratory in West Springfield in 1960.

Westvaco Promotes Three at Covington

Fred H. Freuler, Joseph J. Kilian and Girard L. Calehuff, executives at Covington research laboratory of Virginia Pulp and Paper Co., have been promoted to new responsibilities.

Mr. Freuler, director of the laboratory since 1959, has been promoted to the new position of director of papermaking and mechanical research and development. He will have over-all responsibility for coordinating papermaking and mechanical research at all Westvaco laboratories and will have his headquarters in New York.

Mr. Calehuff succeeds Mr. Freuler as research director of the Covington laboratory. Mr. Kilian has been promoted to research director responsible for papermaking process development work. Mr. Kilian's groups have been attached to the company's Luke, Md., mill, but will be returned to Covington early next year.

Honza Assigned to New Post in England

The promotion of Donald W. Honza to the position of finishing superintendent at the Bowater-Scott Limited plant at Northfleet, England, is announced.

In this new assignment, Mr. Honza will report to Gilbert L. Heath, production manager in charge of manufacturing operations at the Bowater-Scott plants at Northfleet and Walthamstow, England. Both plants are on the outskirts of London.

Mr. Honza joined Scott Paper Co. in November of 1954 as finishing methods manager at Chester. In March of 1955, he was promoted to administrative assistant to the plant manager at South Glens Falls and became finishing superintendent at this plant in May of 1955. He was promoted to his present position of industrial engineering manager at Winslow in May of 1957.

Waterman Joins Northeast Constructions as Sales Mgr.

L. T. Waterman, formerly assistant to J. A. McDermott, vice president, pulp and paper manufacturing, St. Regis Paper Co., has joined Northeast Constructors, Inc., Gouverneur, N. Y., as sales manager.

Northeast Constructors, general contractors covering the whole northeast, specializes in industrial construction and paper mill equipment installations. The company is headed by John W. Rouse as chairman with Richard Rouse as president.

New Project Engineer At Consolidated WP&P

Richard J. Gunderman has joined the Research and Development Division of Consolidated Water Power & Paper Co., it was announced by Dr. S. G. Holt, research manager. Mr. Gunderman, who will serve as a project engineer, is a June graduate of New York State College of Forestry where he received a B.S. degree in pulp and paper technology.

Keep your eye on our Classified Advertising Section

NEWS OF CONVERTERS

G-P Enters Multi-Wall Paper Bag Field

Georgia-Pacific Paper Co. will enter the multi-wall paper bag field by constructing a plant at Toledo, Ore., in its integrated plant complex there. This is in line with statements made last May that the company hoped to be able to expand at Toledo. Actual production is scheduled to begin early in 1962, and paper for the bag plant will be supplied by the adjacent 600-ton-a-day Georgia-Pacific kraft mill at Toledo.

While G-P supplies paper to other bag companies, this is the big forest products concern's first venture in the field itself. In this same area, the company has announced agreement to purchase the Imperial Bag & Paper Company, Chicago, Illinois, producers of a full line of grocery bags and sacks, and Fleetwood Paper Company, Chicago, a diversified paper firm including the distribution of grocers bags and sacks. In the paper container field the company already operates plants at Olympia, Washington; Millbrae, California; Buena Park, California; Monticello, Iowa, and is constructing a plant at Modesto, California.

Flintkote Starts Up New Container Plant in Mississippi

The Flintkote Co. has formally started production at its new $2 million corrugated container plant at Magnolia, Miss. The new Magnolia plant will serve the Mid-South and Gulf Coast sections, rounding out the marketing area of the Hankins Container Division which now extends from the East Coast to the Rocky Mountains. Through its Pioneer Division, Flintkote has been producing and marketing corrugated containers and other paper products on the West Coast for many years.

Flintkote's sales of cartons, boxes and paperboard—for both the Hankins Container Division and the Pioneer Division—in 1960 accounted for 16 per cent of the company's total sales volume of $252,200,000.

The Magnolia plant is a one-story concrete structure comprising 115,200 square feet, situated on 14 acres of land, adjacent to U. S. Route 51.

Potential capacity of the plant is 50 million square feet of corrugated paper products per month.

The plant is the 145th unit in Flintkote's international chain of plants and mills. It was built under the BAWI (Balance Agriculture With Industry) Program of the Mississippi Agricultural & Industrial Board.

Functionally designed, the Magnolia plant is fully equipped with conveyors to handle corrugated board from manufacturing to shipping.

Equipment includes a 78 inch Hooper Swift high-speed corrugator equipped to make "A or B flute," or double wallboard. Fully equipped the Hooper can be operated at speeds up to 600 lineal feet per minute of finished board.

A new Signode semi-automatic compression and strapping machine expedites the assembly and binding of finished cartons and other finished corrugated paper products.

A "Cyclomatic Baler," in a continuous, automatic operation, handles the scrap trim generated at various points throughout the plant. The scrap is blown pneumatically through galvanized ducts into the machine which bales continuously.

Hufford Succeeds Kepner At Kansas H&D Plant

The appointment of A. Dean Hufford as production manager of the Kansas City, Kansas, plant of Hinde and Dauch Division, West Virginia Pulp and Paper Company, has been announced by G. C. Robinson, regional production manager. He succeeds E. L. Kepner who has been transferred to the position of production superintendent at the Kansas City plant.

Mr. Hufford has over 12 years of service with West Virginia, having served the last five years as assistant superintendent at its Williamsburg, Pa. paper mill.

H. J. Mills Elects New President

Roger H. Mills, Jr. has been elected president of H. J. Mills, Inc., a paper box manufacturing concern, succeeding his father, Roger H. Mills, Sr.

Mr. Mills, Sr. who has served as president and treasurer since 1933 now becomes chairman of the board and chairman of the Advisory Committee.

Other officers elected at the company annual meeting were J. Edward Knight, vice president; Mrs. Nellie E. Mills, vice president; Arthur J. Johnson, treasurer; and Attorney Francis V. Tracy, secretary.

Spalding Steps Up to New O-I Managerial Post

Appointment of Richard O. Spalding as manager of general service and transportation for the glass container division of Owens-Illinois Glass Co. has been announced.

Mr. Spalding, manager of the division's corrugated operations for the list eight years, succeeds John D. Griem, recently named as vice president of Owens-Illinois International.

Mr. Spalding became associated with the corrugated shipping box operation in O-I's glass container plants shortly after joining the company in 1941 at Bridgeton, N. J.

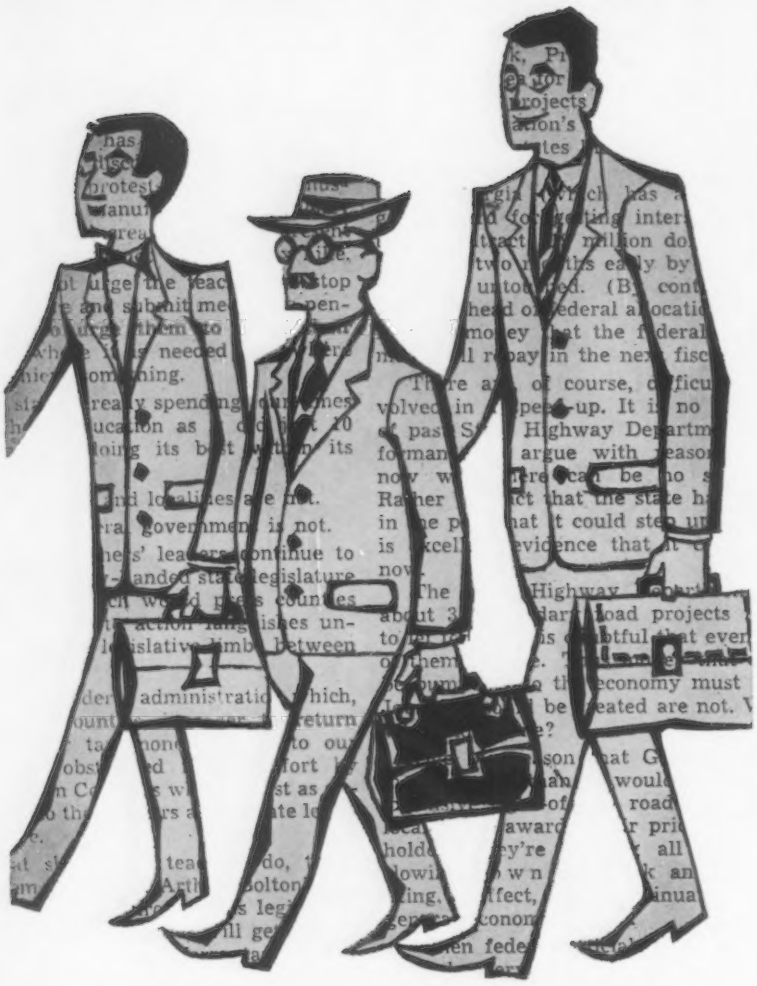
Nashua Names Gen. Mgr., Package Sealing Division

Appointment of John F. McDermott as general manager of the Nashua Package Sealing Division of Nashua Corp. has been announced.

Since September of 1957, Mr. McDermott has been sales manager of the Nashua Package Sealing Division. Previous to joining the division, he was sales representative for the company's flexible packaging products in the State of Maine from 1952 through January 1957, when he became assistant sales manager of the N.P.S. Division.

Standard Packaging Names Byassee to New Post

Guy Byassee, formerly division manager of Standard Packaging Corp.'s Bradley & Gilbert Division, has been appointed assistant to the vice president of the company's converting and packaging group, which includes 13 operating divisions and subsidiaries. He will remain in Louisville, Ky.



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OBITUARIES

Thomas L. Harrocks, 65, a pioneer in the technical paper field, died September 13 at a hospital in East Orange, N. J., after a short illness. He was previously associated with H. Reeve Angel & Co. Inc., Clifton, N. J., as vice president and a director, and later as president.

Frank A. Kelly, 68, retired vice president of The Northwest Paper Co., died August 20. Mr. Kelly became associated with Northwest Paper in 1929 and was elected vice president in charge of lands and timber in 1941.

Ralph E. Lambert, 58, died September 9 at Parkview Memorial Hospital, Fort Wayne, Ind., where he was a patient two weeks.

Born in Iowa and a resident of Fort Wayne since 1929, he was manager of Millcraft Paper Co.

Ralph G. Luff, 67, died Sept. 3 in Somers Point, N. J. Mr. Luff was chairman of the board and chief executive officer of the D. L. Ward Co. and the Paper & Corrugated Specialties Co., and president of Penn Arts Manufacturing, Inc.

He was a former president of the National Paper Trade Association and the Philadelphia Paper Trade Association. He lived in Ocean City, N. J.

William Webster Peter, 62, died of an apparent heart condition, September 6 in Fort Hamilton Hospital, Hamilton, Ohio. Mr. Peter had been with Champion Papers, Inc., for 39 years, retiring in April, 1961. A few months before his retirement he was promoted to supervisor in the engineering department.

Abraham I. Rutt, 73, West Hartford, Conn., a founder and past president of the Standard Paper Co., died Tuesday, August 29. Mr. Rutt, who was born in Russia, helped to found the Standard Paper Co. 50 years ago, becoming president before he retired in 1954. He also founded the Keystone Paper Co., Warehouse Point, 15 years ago.

Charles E. Shaffer, 74, a former engineer for the Munroe Falls Paper Co., died July 25. Mr. Shaffer retired six years ago. Born in West Wheeling he resided in Akron 25 years, moving to Munroe Falls, Ohio, two years ago.

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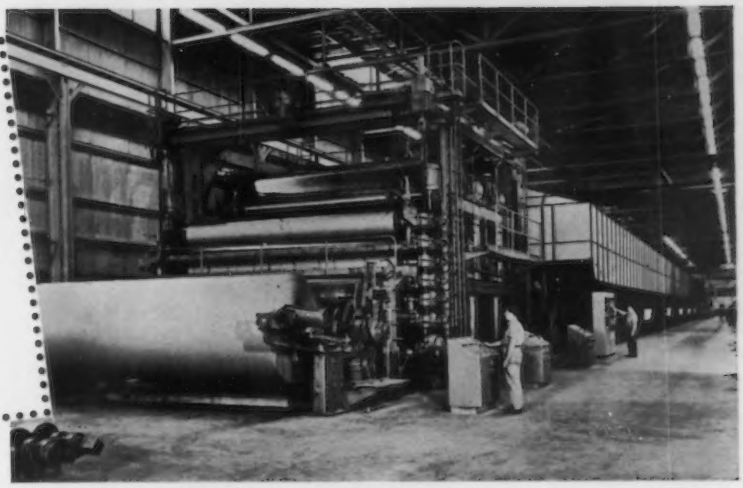

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it is non-toxic
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OPERATOR ACCEPTANCE Operators like it because it won't cause skin rash or give off unpleasant odors.

Insurance Companies and Safety Engineers recommend IMMUNOL.

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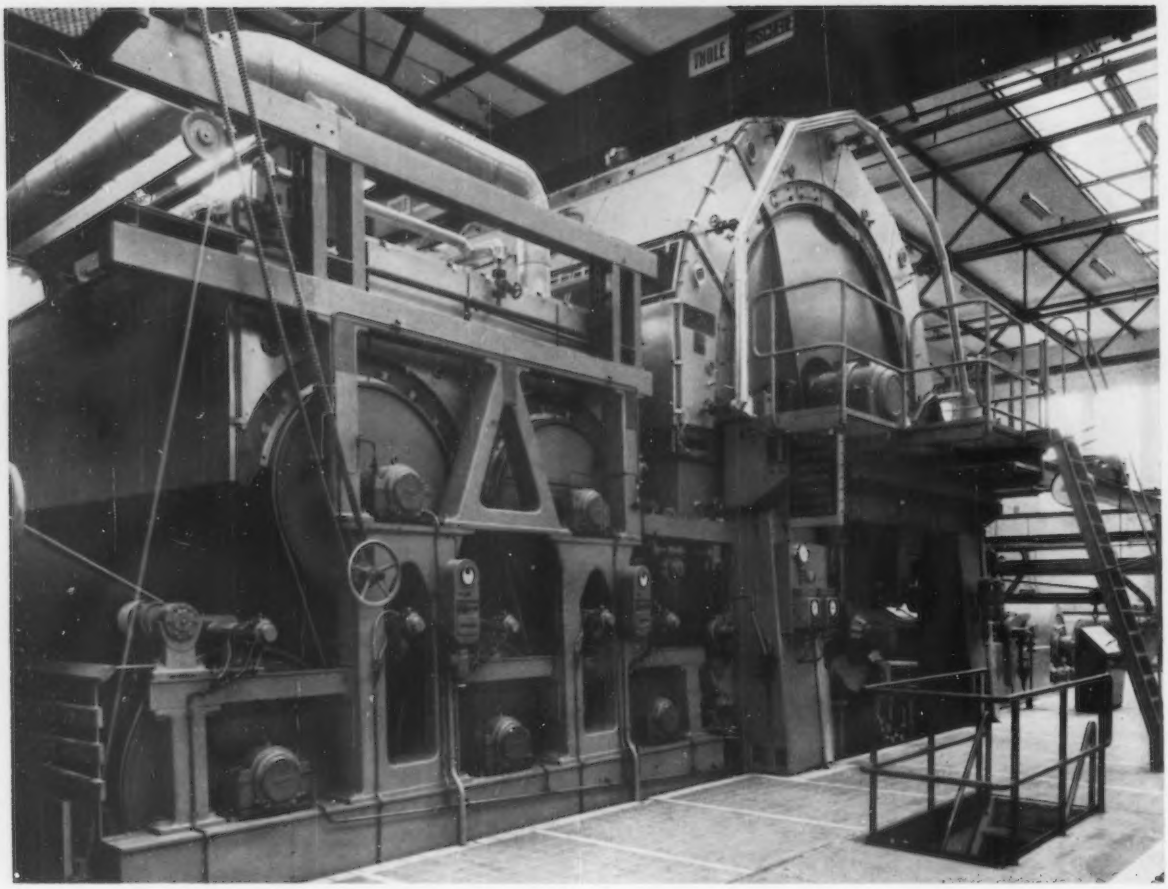


New Air System Permits Machine Operation Without Dryer Felts

High velocity air dryer-hoods offer many advantages on new Yankee combination machine at Dutch mill. They reduced capital cost of machine, required less machine space and give better control of drying.

Ernest F. Barker,
European Editor,
Paper Trade Journal

A new fourdrinier machine has recently been placed into operation in Holland, on which all dryer felts are eliminated through the use of forced air units placed individually over each dryer. Although not the world's first paper machine to operate entirely without dryer felts, this Dutch unit is in all probability the first new machine so designed right from the start. The new machine at the Papierfabriek Coldenhove, incorporated this new concept from the start. A number of other interesting equipment innovations are part of this installation.

The machine has a Yankee dryer, preceded by a bank of standard dryers. It was built by Escher Wyss and the special dryer hoods were supplied by Spooner.

The Mill

Papierfabriek Coldenhove is located in the village of Eerbeek, in West-Central Holland. It is a very old mill, which had its start about 250 years ago. However, aside from its long historical record, its reputation and experience, there are no signs of old age at this mill. There are two paper machines, including the new unit placed into operation earlier this year.

No. 2 machine, which is the main subject of this article, trims 137 inches and makes M.G. sulphite and kraft grades, envelope stock and M.G. bleached. Weight range for No. 2 is 24-62 lbs. (24 x 36-500). Coldenhove purchases all of its pulp, mostly bleached and unbleached straw and wood sulphite, plus groundwood pulp. It also uses some unbleached kraft pulp and waste paper. Most wood pulp is purchased in Scandinavia. Straw pulp is of course secured in Holland.

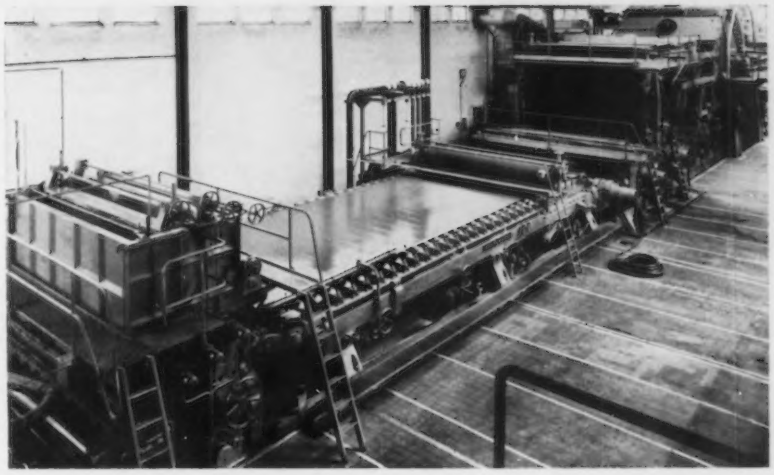
The New Machine

Coldenhove's new No. 2 paper machine is a 148 inch wire width fourdrinier equipped with a Yankee dryer and is designed for a top speed of about 900 feet per minute, with a production of about 50 tons per day.

The headbox is a conventional high pressure inlet unit. The stock inlet is equipped with a valve to equalize pressure on both sides against the center. The slice is designed for extra versatility, it can be adjusted to move up, down and horizontally with precision.

Wire length is 92 feet, there are six suction boxes, and the entire fourdrinier section cantilevers for ease of wire changes. Shake mechanism is conventional and there are 26 table rolls. The couch roll has a diameter of 32 inches and wire tension is controlled pneumatically. The 24 inch diameter dandy roll (see detailed photograph) is equipped with an intricate lever arrangement which makes it possible to very closely control the degree of dandy-roll pressure on the sheet.

The press section consists of two presses, the first is a straight suction press, the second a reverse suction press. Both suction rolls in these units have 29-inch diameters. Both presses are hydraulically loaded and the press felts are cleaned with Escher Wyss felt conditioners. A hydraulically operated transfer roll handles sheet transfer from the couch roll to the first press. All paper guide rolls are driven in this installation.



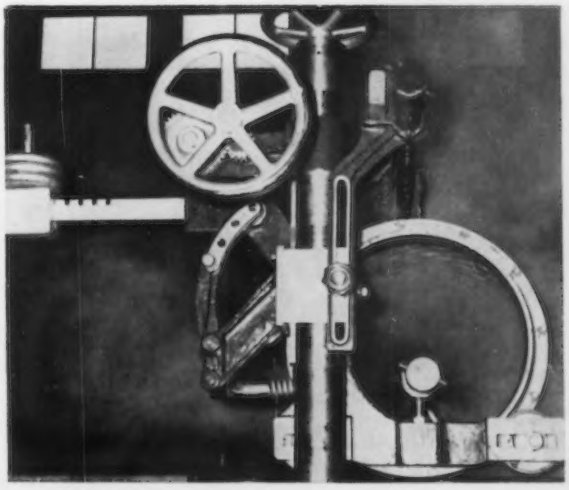
Overall machine view from wet end.

Dryer Section

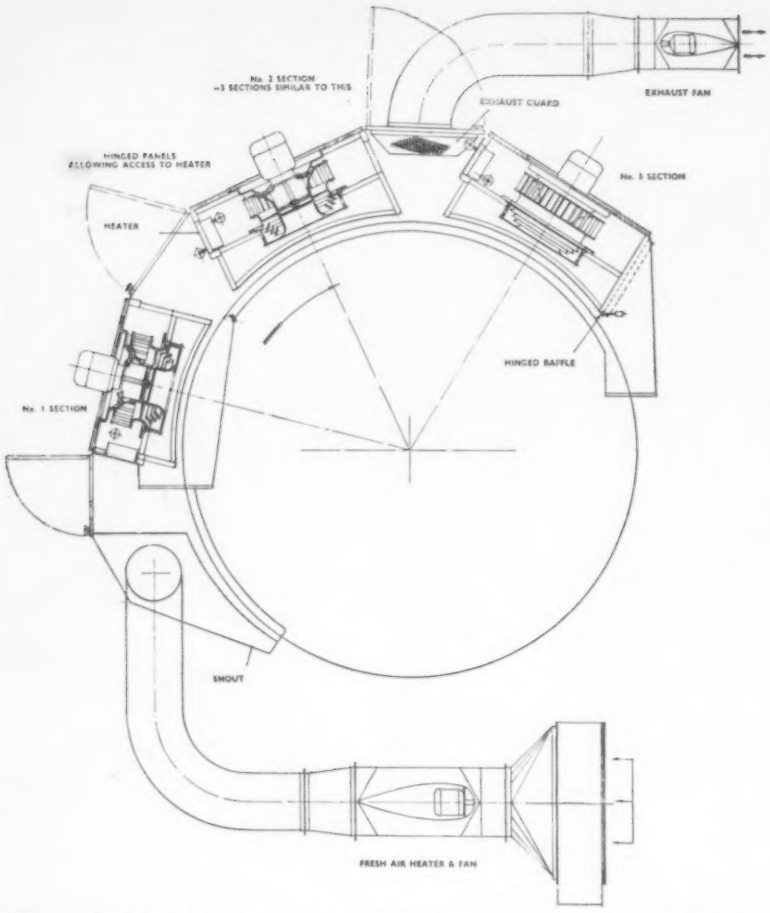
The dryer section consists of five 59 inch diameter pre-dryers and one 177-inch diameter Yankee. Dryer faces are 157 inches. Maximum steam pressure ratings for the pre-dryers are 42 p.s.i. and for the Yankee 84 p.s.i. The pre-dryers are installed in two levels, two in the upper row and three in the lower position. Because the Spooner air units have eliminated dryer felts, the dryer section in this interesting machine is a surprisingly uncomplicated one. Felt dryers, felt guide roll, felt tension controls and guides have of course been eliminated. All pre-dryers are equipped with reciprocating, hydraulically operated, doctors. A central lubrication system is part of the dryer section. The Yankee pressure roll is loaded pneumatically.

In the Spooner units, described in greater detail below, hot air is blown onto the web as it moves over the drying cylinders. This hot air is then returned into the hood system by means of suction, to be reheated for reuse. This "forced convection drying hood" principle, is used in both the hoods which cover the pre-dryers and the Yankee dryer. These units which Spooner calls "hoods" are similar in operation and principle to what are called high velocity air dryers in North America and which are manufactured by a number of companies there.

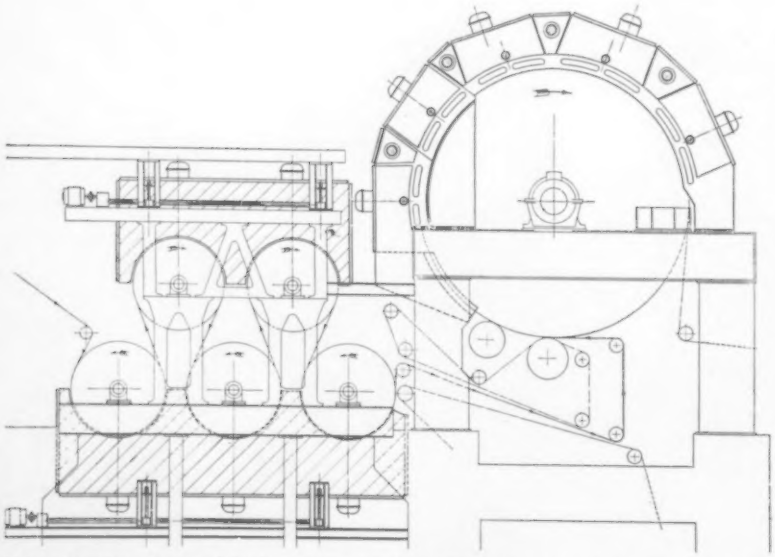
As the direct result of the more efficient drying made possible by these units, the machine operates at a speed estimated to be about 35 per cent greater than if it were equipped with dryer felts and a conventional dryer section, according to Mr. Sanders. He told PAPER TRADE JOURNAL that it is as yet too early to meaningfully summarize the felt vs. steam



Dandy roll close up shows lever arrangement to control roll pressure on the sheet.



Cutaway drawing shows typical Spooner hood on Yankee, air fan, and heating system. Although Coldenhove hood has five sections, all are identical to the three shown here.



Side elevation sketch of high velocity dryers on Coldenhove machine. Cross-hatched area indicates hoods on top and bottom pre-dryers.

economics and other drying data which are now being collected by the mill's technical department. However, these figures will be made available to this publication toward the end of this year. Meanwhile, preliminary indications show at this time that Mr. Sanders' expectations of the higher-than-normal production over a similar but conventionally hooded machine, are being realized. An automatic moisture control instrumentation system and a radioisotope type basis weight control instrument have been ordered for the machine, will be installed shortly and are expected to materially aid in the careful study to which the machine's dry end is now being subjected.

Spooner Hoods

The air units for both the predryers and Yankee dryer on the Coldenhove machine, were supplied by the Spooner Dryer & Engineering Co. Ltd. The company calls those of its units designed to individually cover standard machine drying cylinders "Accelerator Hoods", and its Yankee covering units "Axiflo Evaporator Hoods."

Basically, in both types, a fan supplies air under pressure into a pressure chamber from which it flows through nozzles onto the wet paper. The spent air is collected and returned through steam heaters to the fan suction, and then it goes through the fan and around again. A portion of the circulation is removed before passing through the heaters and this is exhausted direct to the outside atmosphere. It may also first be passed through a heat recovery unit. The exhaust is replaced by an equal quantity of fresh air, heated externally and supplied to the circulating fan suction, i.e. after the heaters.

Yankee Dryer Hoods

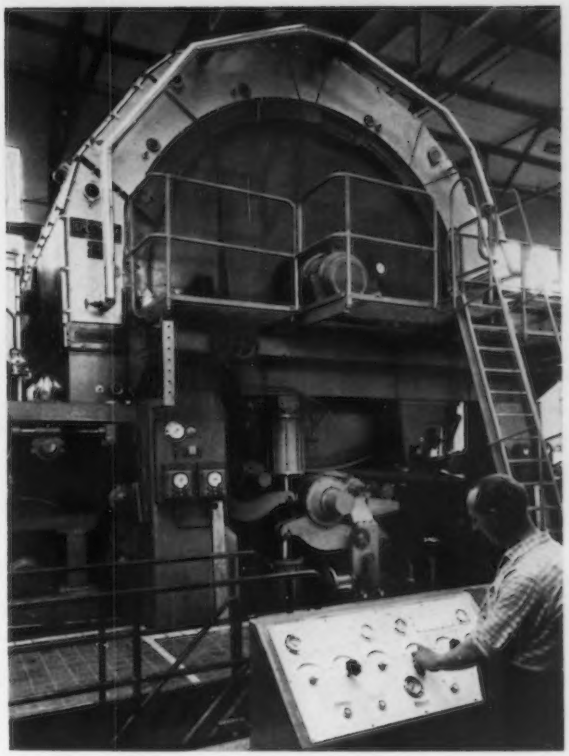
On the Yankee Dryer the same basic principles of hood design apply. The entire "hood" is composed of individual sections functioning separately. The number of these "sections" depends on the size of the Yankee cylinder. Each self-contained section has its own axial flow fan, steam heater, pressure chamber and nozzles. The Coldenhove machine has five such sections on its Yankee dryer. In addition to these main circulating sections, there is also a fresh air section (commonly called a "snout"). All the fresh air required for evaporation is heated and blown into the snout by an external fan.

The Spooner Co. stresses the following three points associated with

the design of this equipment: (1) A pressure area is maintained under the parts of the hood close to the sheet. This, it is claimed, prevents pieces of paper, which may have become detached during threading, from being sucked off the cylinder and thus cause blockage. (2) There are no air ducts inside the hood, thanks to what is said to be a special fan design. This assures even air distribution and avoids pressure losses usually associated with ducting. (3) Low humidity is maintained where the sheet is wettest, increasing gradually toward the dry end and thus resulting in steam consumption economies and a high water evaporation rate.

In the Yankee unit, the nozzle openings, through which the drying air is blown onto the paper, are half an inch in length. There is a two inch clearance between them and the sheet. The air temperatures used in these hoods vary in different installations from about 225°F. to 325°F. Any steam pressure from 20 p.s.i. is considered satisfactory. Normally, the make-up fresh air is heated before introduction into the hood and it is economical to use as much flash steam as possible for this purpose.

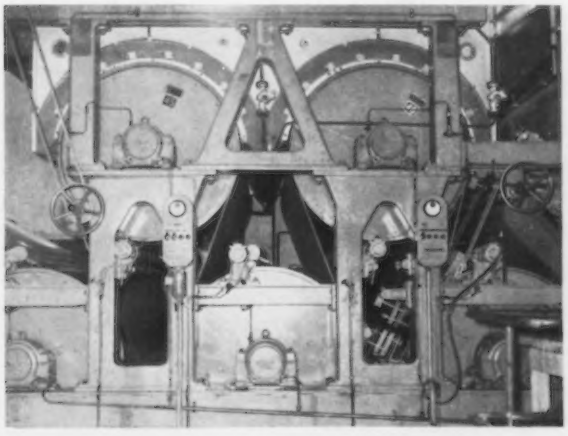
The major design details of the air unit on the new Coldenhove machine are as follows: Total air circulated in the hood: 41,500 c.f.m. Jet velocity: 8,400 f.p.m. Evaporation rate: 10.2 lbs./sq. ft./hour. Steam pressure to hood heaters: 140 p.s.i. Air temperature: 300°F. Total fan horse-power of circulating fans (running horsepower): 37.5.



Yankee cylinder close-up. Note easily distinguishable five separate hood sections.

Accelerator Dryers

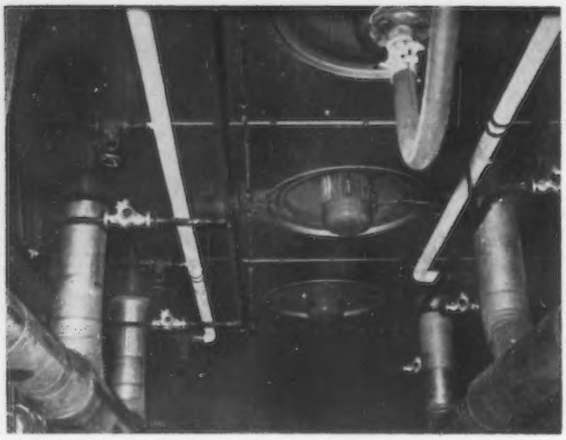
The principal difference between the Yankee unit and the Accelerator units is related to the fact that the paper under this unit does not adhere to the surface of the cylinder. Therefore, the sheet must be kept in as intimate contact as possible with the cylinder, a function which is of course performed in conventional installations by the dryer felt. The paper-dryer surface contact is assured by the airflow from the hood, which has been so arranged that there are no regions of negative pressure which could lift the sheet from the dryer surface. To assure positive pressure, the air from the nozzles, after striking the sheet, flows laterally in both directions towards the ends of the cylinder before it flows away radially from the cylinder face.



First two pre-dryers detail. Note how hood covers half of drying cylinder.

These units, which each cover one drying cylinder, are identical to the individual circulating "sections" which cover the Yankee dryer described above. An important difference does however exist in that these Accelerators are retractible away from the dryers they cover. This is because the clearance between the air nozzles of these hoods and the sheet is much smaller than is the case at the Yankee. The Accelerator units have nozzle openings between $\frac{3}{16}$ inch and $\frac{1}{4}$ inch and the clearance between them and the paper ranges between $\frac{3}{4}$ inch and 1 inch. These smaller dimensions are desirable for optimum results and they are made possible because the hoods are retractible (for paper threading), something not possible in the case of the Yankee. This closer contact between hood and sheet makes for what is said to be "maximum drying rate and considerable fan power savings."

The Accelerator units for standard dryers are self-contained. Their main circulating fans and air heaters are contained in the hood mounted over the dryer. This obviates the necessity for large cross-sectional area ducting which would connect the fans to their units. The only ducting required is a small cross-sectional area for bringing in the fresh air and removing the exhaust.



Basement view of hoods installed below the bottom pre-dryers. (Looking almost straight up.)

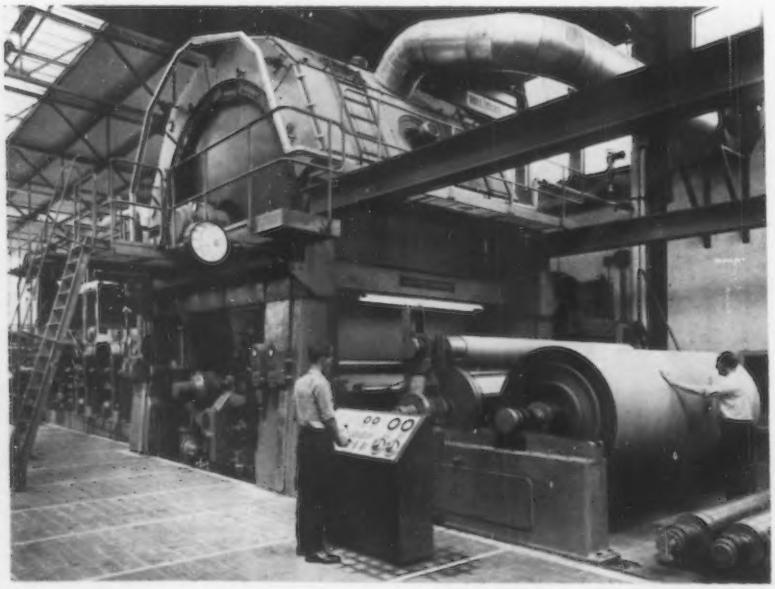
An incidental, but interesting point here is that filters are not considered necessary in these hoods. Because the main circulating fans are of the axial type, they are reversible. Doing so, then, provides a simple and quick method of clearing dust out of the units during machine shutdowns.

Five Dryers Do Job of Ten

The Coldenhove pre-dryer Accelerator units have the following specifications: All figures are for one unit, covering one dryer. Air circulation: 9,000 c.f.m. Jet velocity: 8,400 f.p.m. Steam pressure to heaters: 140 p.s.i. Circulating air temperature: 300°F. Running horsepower: 7.5.

The 8,400 f.p.m. jet velocity available here, is considered relatively low. Although Spooner makes these hoods with jet velocities of up to 15,000 f.p.m., it was considered unnecessary to use such high velocities in this installation. Thus, fan horsepower was saved because the five Coldenhove pre-dryers provide sufficient evaporation capacity to operate the machine even at top production and still create the correct conditions for making machine-glazed paper.

The mill reports that as a direct result of the hoods which cover these pre-dryers, the installation of five to seven additional conventionally covered felted dryers was avoided. In other words, these five forced convection hooded dryers do the job of ten to twelve conventionally hooded dryers.



Machine view from dry end showing Yankee dryer with hoods and pope-type reel. There is no calender stack.

Units Retract, Up and Down

The Accelerator hoods are retractible away from the dryers they cover. Interesting in this particular installation is however the fact that the units on the top dryers not only lift away (already quite common) but that the units under the bottom dryers retract downward, toward the basement. This feature in the Coldenhove installation is unusual and for this reason it was possible to eliminate the dryer felts entirely.

The retracting movement is effected by four coupled screwjacks installed at each hood. These are operated by one push-button controlled electric motor for each unit.

At Coldenhove, the upper units lift a maximum of 18 inches and the lower units drop a maximum of 24 inches. The lower units in this installation are identical in every respect to those which cover the upper dryers, except for their slightly larger retraction space. According to Spooner spokesmen, a most important point in fitting hoods for lower bank dryers, is that there should be access to the space between the drying cylinder and the retracted hood, to make it easy to remove any broke which may become lodged there.

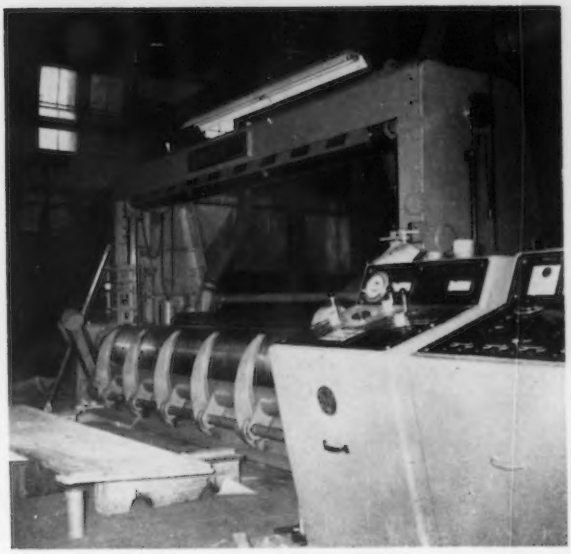
It is claimed that there is no special inherent danger of the web breaking while it travels around the dryer under the hood. However, if the sheet breaks in the draw, then nothing can stop it from sliding down between the lower cylinder and its hood. In such a case it must of course be possible to clear it out with the least possible delay. As can be seen from the accompanying drawing of the Coldenhove dryer section, the standard concrete floor was here replaced by a steel joint opposite the pre-dryer section. This was done so that when the lower hoods are retracted, there is sufficient free space below the dryer cylinders.

Why Coldenhove Chose Hoods

H. Sanders, president of Papierfabriek Coldenhove, handled practically all the machine specification details himself. He knew of the Spooner hood potentials and decided early while the machine was still being designed, "to do away with dryer felts."

Here is a summary of the factors which led to the decision to install these hoods on this machine, based on PAPER TRADE JOURNAL's discussion with Mr. Sanders.

1. To reduce the number of pre-dryers normally necessary to give maximum production from the machine and still maintain this "maximum productivity." This reduction



Pneumatic winder has capacity to handle output of a second machine in addition to the No. 2 machine.

of dryers obviously netted capital investment savings and space economies.

It is interesting to note here in this regard that the Spooner Co. makes the following general statement about reducing the number of dryers on a machine by the use of these hoods: "One hooded cylinder has about the equivalent drying capacity of two to three unhooded cylinders. This, when the circulating air in the hoods is heated by steam, to a tempertaure of 280°F. to 320°F. On the other hand, when the circulating air is heated to between 500°F. and 600°F. by using gas or oil firing, then one hooded cylinder can be made equivalent to four to five unhooded cylinders. Meanwhile, the steam consumption for a system of cylinders and hoods of this type is about the same per ton of paper made, as with the conventional system of drying cylinders and vapor removal canopies."

2. No dryer felts are required with these hoods. As a result, money is saved in the form of initial cost of felt drying equipment, cost of felts themselves and also the time always required to change felts.

3. The mill went along with the manufacturer's claim that drying on individually hooded pre-dryers can be more accurately controlled. Consequently, optimum conditions for good glaze on the Yankee and maximum production are expected.

4. As a result of these hoods, lower steam pressure can be used in the pre-dryer cylinders, which not only improves the quality of the sheet, but is also said to reduce the amount of fiber pick-up on the cylinder surface.

Interesting Winder

Because of the steady runs of M.G. grades to be made on this machine, it was considered unnecessary to install a machine calender stack. Consequently, on emerging from the Yankee dryer, the web merely passes over a brush-type moistening device and is then immediately wound on an Escher Wyss Pope-type reel.

The reel is followed by a pneumatic winder furnished by Jagenberg. This is a particularly interesting unit. The center distance of the backstands can be adjusted to accommodate parent reels of various widths. Maximum winder speed is 5,000 f.p.m. which means that this winder is not only in a position to cope with the output of this paper machine, but it offers sufficient reserve for handling the output of a second paper machine. Web threading is handled by compressed air jets and tapes. The slitting width can be adjusted infinitely with Jagenberg's multi-shear slitter roll. The top knives are engaged and disengaged pneumatically from the control console.

For automatic web tension control, Jagenberg usually uses pneumatic devices on winders of this size. However, in the Coldenhove unit, they say they used a brake generator for the first time. Acceleration time is said to be greatly reduced in this design because the brake generator operates as a motor when the winder is accelerating. The generator also compensates for the inertia of the parent reel and it thus helps prevent the web breaks. Brake generators now tend to be considered superior as tension controllers to any mechanical web control means.

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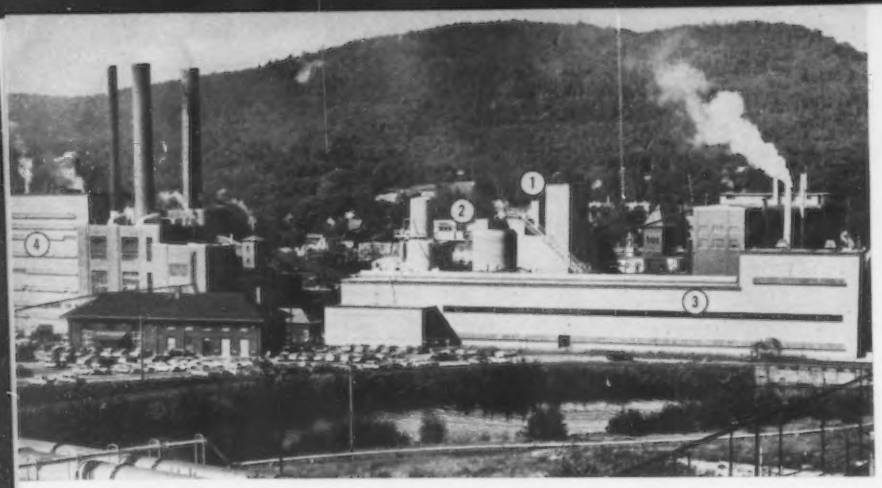


General view of west side of mill shows main part of new pulp mill buildings: 1. continuous digester; 2. chip silos; 3. lime kiln and causticizing equipment; 4. recovery boiler. Pre-fabrication and erection of stainless steel stack, programmed by computer bear interesting story.*

Exit Sulphite, Enter Softwood Kraft as Oxford Winds Up Pulp Mill Expansion

Improvements consist of new bleached softwood kraft mill including a Kamyr continuous digester plus expansion of over 30 per cent in bleached hardwood kraft pulp production at Oxford Paper's Rumford, Me., mill.

In 1960, investments in new production equipment and buildings were the highest for any single year in Oxford Paper Co.'s history. The results of this $17,000,000 improvement were recently brought to fruition with the startup of the new softwood kraft pulp mill at the Rumford mill of this 68-year old firm.

The pulp mills in 1959 included a 160 t.p.d. sulphite mill cooking spruce fir, and hemlock which furnished the softwood requirements, a 260 t.p.d. kraft mill cooking mixed northern hardwoods and a 70 t.p.d. groundwood mill. In addition the company had a second 130 t.p.d. sulphite mill which had been shut down but which was activated during the construction program. The improvement program included replacement of the sulphite mill with a 175 t.p.d. softwood kraft mill, expansion of the hardwood mill to 350 t.p.d. and no changes in groundwood operation. The brightness level on both chemical pulps was approximately 81 as dictated by existing bleaching facilities. To raise the brightness level to a required 86-88, the old sulphite bleachery was replaced and the existing hardwood bleachery extended. The liquor recovery system designed for 260 tons of hardwood kraft was extended and modified to accommodate the addition of softwood kraft and additional hardwood production. The hardwood facilities were placed in operation July, 1960 and the softwood mill started July, 1961.

The new softwood kraft mill according to William H. Chisholm, president, alleviates a serious river pollution problem by eliminating production of sulphite waste liquor.

"Many more benefits to the expansion program, other than improving present quality," Mr. Chisholm said, "are less dependence on the more expensive softwoods and more dependent on the plentiful and economic supply of hardwood, the use of purchased pine chips from nearby sawmills, a means of diversifying into other desirable grades of paper; eliminating the need to store pulp for the stream pollution period, eliminating the need for purchasing thousands of tons of market pulp, and relieving the overloaded condition of our present recovery unit, to say nothing of making substantial savings."

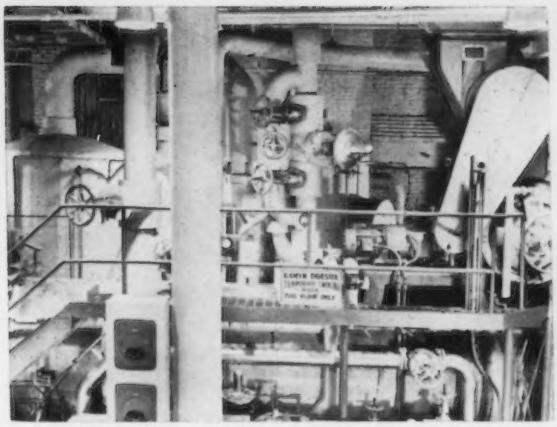
According to Mr. Chisholm the decision to go to softwood kraft pulp was reached only after more than three years of study. The studies involved: (1) The advantages of building a pulp mill at another location and shipping to Rumford; (2) depending entirely on market pulp; (3) the possible acquisition of a pulp producer. Engineering evaluations showed that conversion to all kraft pulping at Rumford entailed no capital penalties with respect to recoverable or "cross-recoverable" base such as magnesium or sodium.

The first step in this longer range program took place nearly ten years ago when Oxford switched from soda to hardwood kraft pulping. Through the years the production of hardwood kraft has been improved and expanded. More recently modern bleaching facilities have been provided using chlorine dioxide to insure high brightness pulps with a minimum loss of quality. The final step was the further expansion of our hardwood kraft facilities, the conversion from sulphite to softwood kraft and associated bleaching and recovery facilities. This program was based on extensive studies of pulping processes.

Generally, new equipment and operation of the facilities is conventional in nature. Principal new equipment includes:

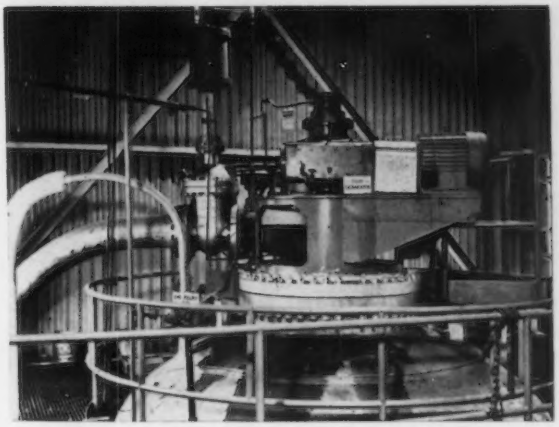
- Kamyr continuous digester, 12 ft. in diameter and 90 ft. high, having a nominal capacity of 225 t.p.d. The digester system utilizes the lat-

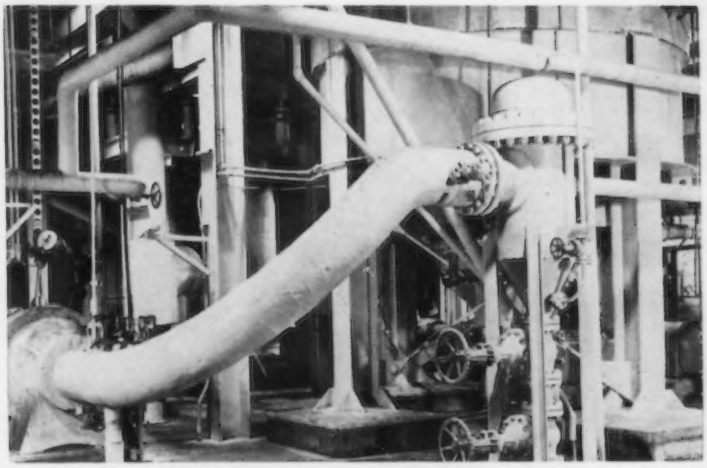
* See Paper Trade Journal, October 31, 1960, for details.



Ahead of Kamyr digester, LOW PRESSURE FEEDER delivers blended chips from silos into STEAMING VESSEL. Low pressure steam from digester flash tank is used. Chips discharge into high pressure feeder and are flushed with liquor to the . . .

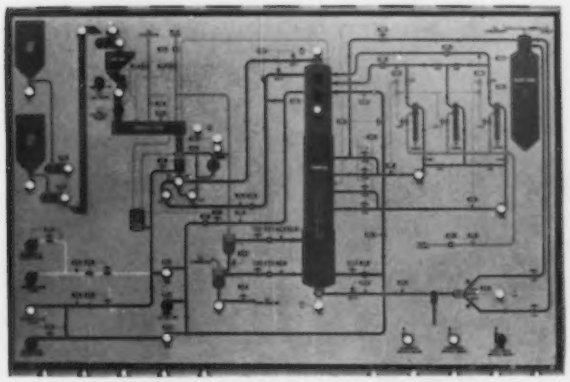
. . . SEPARATOR at the top of digester. Here, a screen separates liquor from chips and returns it to the suction of the circulating pump. Chips sink inside digester and cooking liquor is introduced near top of vessel.





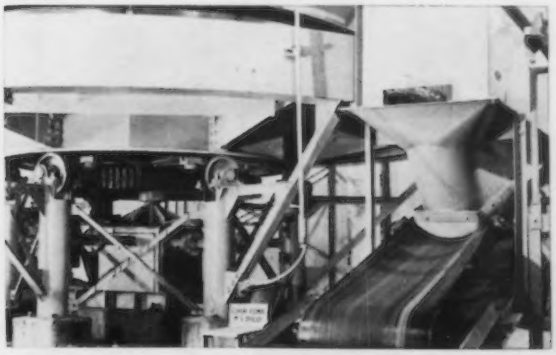
OUTLET DEVICE, METAL TRAP, and BLOW UNIT at bottom of digester. Upper zone is heated to 310°F and lower zone to 338°F during cook. Retention time is 1¼ hours at maximum temperature and rated production.

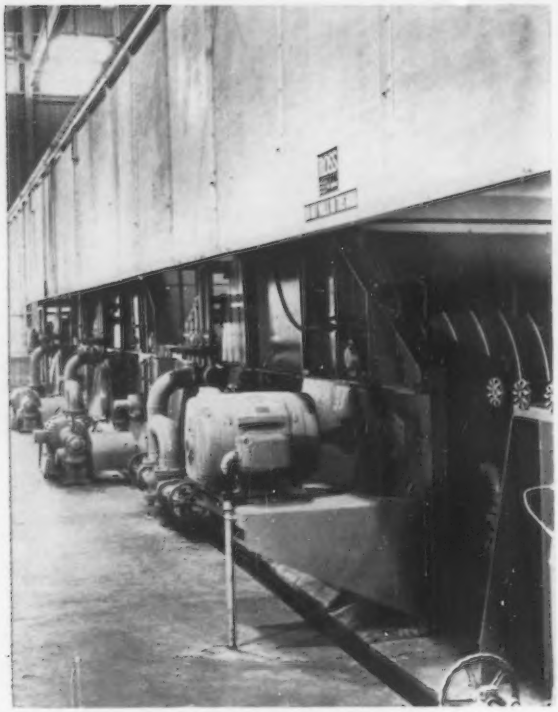
Inside digester at bottom showing COLD BLOW INLET, OUTLET DEVICE ARM, and SCREEN PLATES for diffusion-extraction zone. Black liquor from washers at 170°F ▼ enters through central pipe.



GRAPHIC PANEL shows digester operation from chip silos (l.) through feeders and steaming vessel, digester, to blow tank (rt.). Agitated blow tank has one hour capacity at four per cent consistency.

ROTARY PLATE DISCHARGER and CONVEYOR deliver chips from silo to low pressure feeder. Blend may consist of spruce, fir, hemlock and pine. Silos are ▼ filled by a pneumatic conveyor from woodrooms.

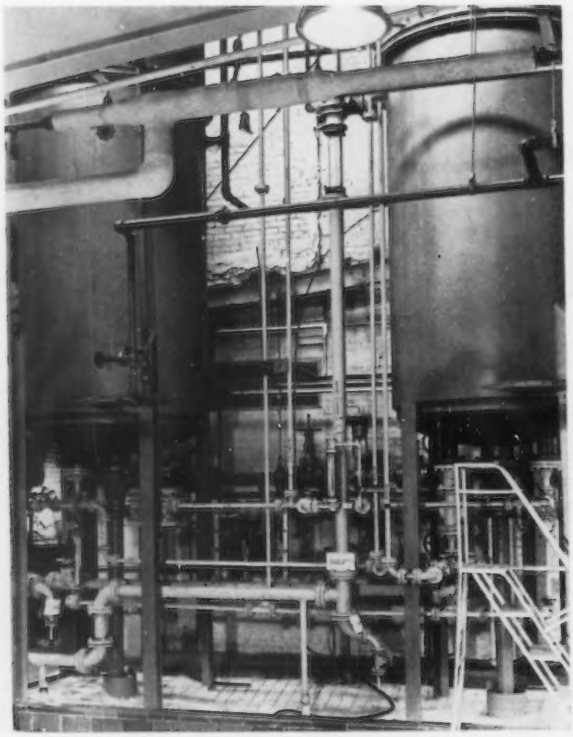


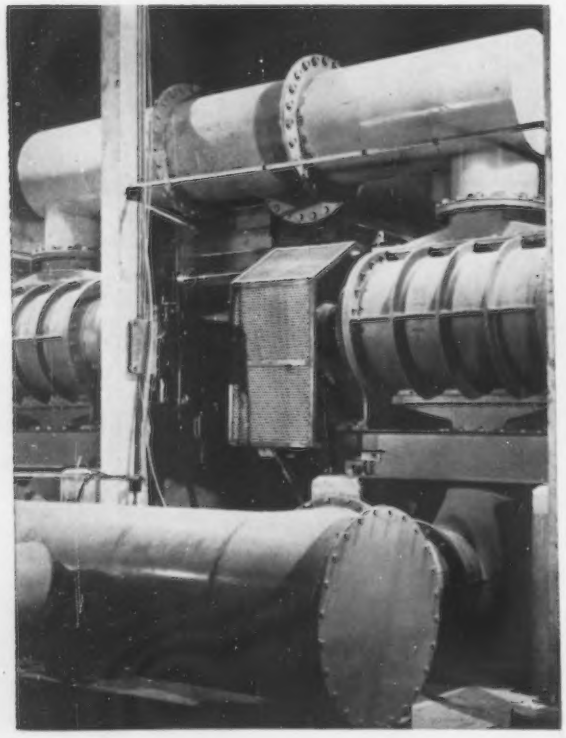


Hardwood **BROWN STOCK WASHING** system consists of 11½ x 16 foot units. Softwood washers consist of former hardwood washers. Both systems operate in parallel and are controlled from a common graphic panel. Decker in softwood system is remote and is controlled by use of closed circuit TV.

Softwood **BLEACH WASHERS** are 9½ x 14 ft. units and all new. Fourth ClO_2 stage and washer was added in hardwood bleachery to meet increased brightness needs. Operation of both plants is controlled from semi-graphic panels.

To produce **CHLORINE DIOXIDE**, a 6 t.p.d. conventional Solvay plant was installed. The reactors are lead-lined steel vessels and the primary absorber is a packed, brick-lined steel tower 2½ x 25 feet high.





CHIP BLOWERS handle chips to the hardwood digester bins and to the softwood silos. Purchased pine and hemlock chips from woodroom are blended together in one silo, and spruce and fir chips are stored in the other silo, each of 250 cords capacity.

est in Kamyr's diffusion-extraction circulation of liquor and cold blow to preserve pulp strength.

• A 300 ton Combustion Engineering recovery furnace producing 137,000 pounds of steam at 700 p.s.i. and 750°F. The installation includes a cascade evaporator and wet bottom electrostatic precipitator.

• An oil-fired lime kiln, 10 ft. in diameter by 275 ft. long designed to burn 150 tons line per day. Kiln is equipped with Bojner sector and trefoil refractory section.

• Four-stage softwood bleachery and a fourth chlorine dioxide stage in the hardwood bleachery.

• An 18-ft. diameter Hydrapulper, to disintegrate baled pulp (dried at the mill). Pulp storage ahead of the paper mill is limited and rather than install large bleached storages at this time it was decided to store dried pulp as insurance against pulp mill shutdowns.

• A 6 t.p.d. chlorine dioxide generation plant. As the construction schedule dictated the start-up of the hardwood bleachery one year ahead of the softwood, a 2-ton auxiliary absorber was installed, built of resin impregnated Fibreglas. To Oxford's knowledge, this is the first absorber of this construction and was completely satisfactory in operation. A spherical acid accumulator was relined for use on a chlorine dioxide storage tank.

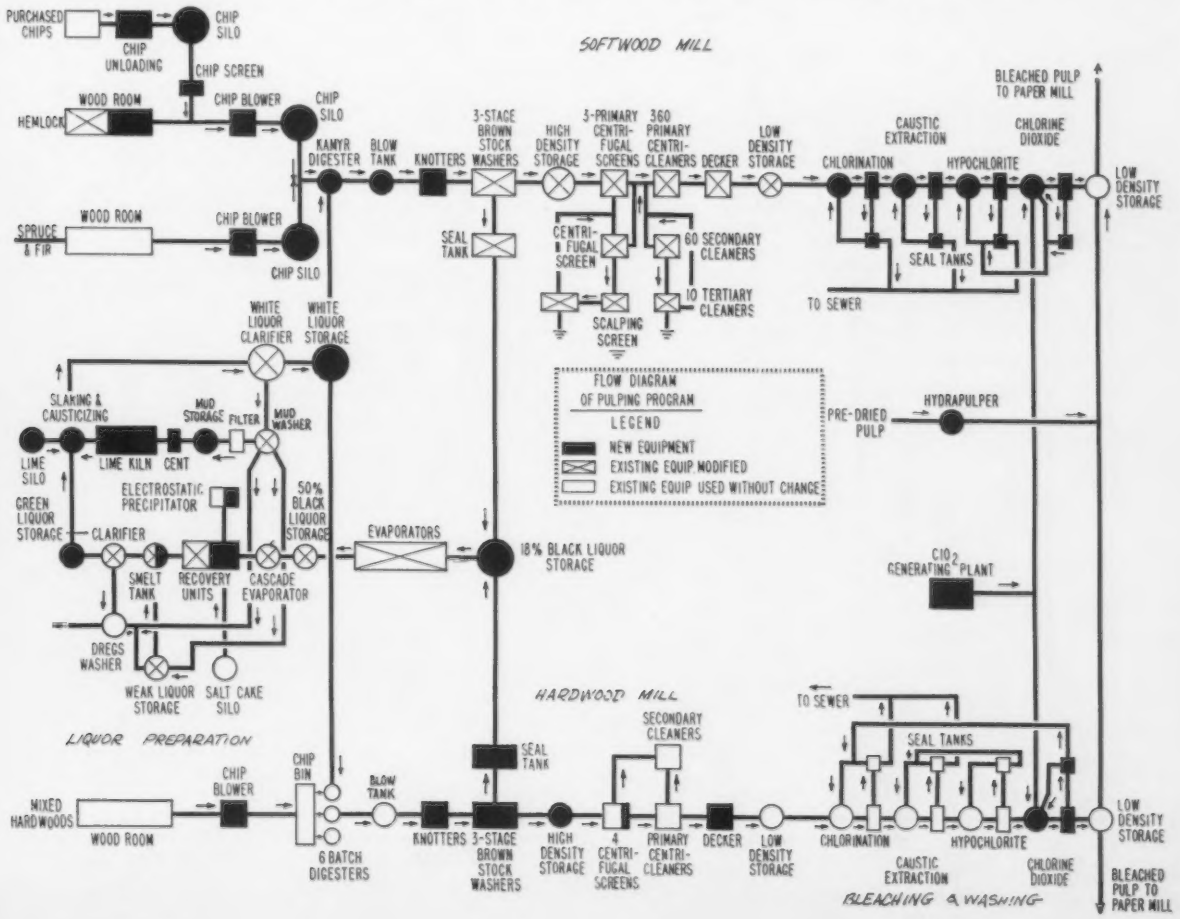
• Purchased chip rail car and truck unloading facilities and silo, pneumatic conveyor and soft wood chip silos.

Automatic Controls

Instrumentation and automatic process control of the new facilities was the subject of very detailed study. In the interest of operating efficiency and manpower economy all plants were automated as much as possible. The electrical and process control for all major plants were concentrated on central control panels at the operators station. Semigraphic panels were installed on the more complex operations and conventional panels on the simpler installation. In all cases Panalarm systems were provided to sound on process variables or motor failures. Multitube bundles were used extensively made up of plastic tubing in the bleachery areas and copper tubing in other plants. To insure the best possible operation of pneumatic controls, a new 800 cu. ft. air compressor equipped with regenerative desiccant air dryer was installed for instrument air. This is tied in with the mill air system into spill surplus air or to bleed from the mill system in case of compressor failure. A total of 150 ft. of panelboard and 19 miles of tubing used in the project give a visual picture of the extent to which the instrumentation was carried.

Power was provided by five new 11,000-440 volt and two new 11,000-2200 volt load centers located throughout the plant. A total of 9,500 new HP was added and 1800 HP converted from 40 cycle.

Schematic flow chart shows what new equipment was installed (black areas) and what existing equipment was modified (shaded) or left unchanged (clear) to meet the increased pulp production and chemical recovery requirements.



Engineering and Construction

The company engineering staff and construction department, tailored to carry a normal capital program, were not sized to carry out the proposed work in the time available without assistance. It was decided that expanding the company's staff on a temporary basis was undesirable and the Rust Engineering Co. of Pittsburgh, Pa. was engaged as Engineer-Contractors in certain areas. In dollar value Rust Co. carried out approximately ⅔ of the engineering and ⅓ of the construction program. As far as possible the work was divided so that Rust worked in isolated new plants and Oxford in those areas closely associated with existing operations. Except for construction supplies on the Rust portion of the job, purchasing of materials was handled by the Oxford Purchasing Department—but expediting was done by the company doing the construction work.

The problem of building a new mill inside of an operating one presented major problems. Many of the installations were made in the center of manufacturing areas where continuity of existing operation was paramount. Others required rebuilding of old equipment to clear sites for new plants. To assist in relieving some of the space problem, the idle Island Division sulphite mill was started up and supplied the mill with softwood during the program. In spite of steps taken, construction congestion proved one of the more difficult construction problems.

To meet the target dates, detailed engineering and construction schedules were developed at the start of the program and strictly adhered to throughout the job. All start-up dates were met and all plants placed in operation almost to a day of the original schedule.

In many cases, existing buildings were remodeled and reused. Often this was dictated by the location of associated processes and services and presented major construction problems. All new buildings were structural steel framing with Galbestos siding and precast concrete roof.

Severe corrosive conditions were anticipated in some areas and the subject of protective coatings was given serious consideration. The general painting specifications called for hot spray vinyl except in specific areas where temperature limited their use.

MAJOR SUPPLIERS OF NEW EQUIPMENT

Softwood, Kraft Pulping

Continuous Digester	Kamyr, Inc.
Blow Tank	Portland Co.
Chip Feeders	Kamyr, Inc.
Accessories:	
Instruments & Controls	Foxboro
Process Pumps	Swedish Delaval, Bingham
Digester Erection	Chicago Bridge & Iron
Heaters	Electric Steel & Foundry
Steaming Vessel	Mass. Engineering Co.

Wood Handling & Preparation

Chip Screens	Orville-Simpson
Log Splitter	D. J. Murray
Rechipper	D. J. Murray
Pneumatic Chip Conv.	Radar Pneumatic Inc.
Chip Silos: Slip Form Concrete, Stave	The Rust Company Neff & Fry
Silo Dischargers	Chain Belt Stephen-Adamson
Mechanical Chip Conv.	Chain Belt Stephen-Adamson

Washing, Cleaning, Screening

Knotter Screen	Impco
High Density Pump	Impco
Brown Stock Washers	Impco
Pulp Screen	Trimbey Machine
Instruments & Controls	Minneapolis-Honeywell
Tanks	Chicago Bridge & Iron
Pumps	Warren Pump
Hood & Ventilation	J. O. Ross Engineering Mead Pulp Sales
Vacuum Rewasher	Impco

Bleaching

Bleach Towers (Swd)	Impco
ClO_2 Tower (hwd) Mixers	Impco
Thick Stock Pumps	Impco
Washers	Impco
Seal Tank	Impco
Instruments & Controls	Minneapolis-Honeywell
Towers	Chicago Bridge & Iron
Linings	Stebbins Engr.
Pumps	Gould Pump
Chlorine Dioxide Plant	Solvay Process
ClO_2 Producers	Knapp Mills Co.

Bleaching (Continued)

Absorption Towers:	
Fiberglas	Maurice A. Knight Co.
Tile-lined	U. S. Stoneware Co.
Air Blower	Roots-Connerville
Metering Pump	Lapp Pulsafeeder

Liquor Recovery & Preparation

Recovery Unit	Combustion Engineering
Accessories:	
Instruments & Controls	Bailey Instrument Co.
Smelt Tank Economizer	J. O. Ross Engineering
Fans	American Blower Co.
Pumps	Worthington
S. S. Clad Stack	Portland Co.
Electrostatic Precipitator	Koppers Co.
Evaporator Improvements	Swanson Evaporator Co.
White & Black Liquor Storage Tanks	Chicago Bridge & Iron
Slaking & Causticizing	Dorr-Oliver
Lime Kiln	Traylor Engr. & Mfg. Co.
Accessories:	
Instrumentation & Controls	Leeds & Northrup
Scrubber	Peabody Engineering
Oil Burning Equipment	Coen Co.
Fans	Buffalo Forge

General Equipment

Hydrapulper	Black-Clawson
Electrical Load Centers	General Electric
Motors	General Electric
Motor Controls	Westinghouse Co.
General Heating & Ventilation	J. O. Ross Engineering
General Prefabricated Piping	C. F. Guyon Co. Portland Copper & Tank Co.
Consistency Regulators	DeZurik
Stock Control Valves	DeZurik
Misc. Control Valves	Minneapolis-Honeywell Foxboro
Heat Exchangers	Delaval, Condenser Service, Rosenblad, Artisan Metal Products
Variable Speed Controls	American Blower, Louis-Allis
Instrument Air Compressor	Joy Manufacturing
Centrifugal Pumps	Ingersoll Rand, Warren Pumps, Labour Co., Worthington, Gould Pump

Personnel participating in the expansion are: E. V. Ahara, chief engineer; C. L. Ferguson, mill manager; J. A. Rogers, asst. chief engineer; G. S. McKnight, director of research; (standing) V. A. Carpans, manager of quality control; H. P. Waldenmyer, asst. mill manager-pulp; M. S. Anderson, supervisor of groundwood and pulp bleaching; and B. K. Mayer, asst. director of research.

PJT NEW LITERATURE

Activated Sludge Processes

Describes four recent equipment and flowsheet developments for the activated sludge waste treatment process. The four are the D-O INKA Aeration System, D-O Aerator, the RSR Clarifier, and the Spiro-Vortex System including the Superate Filter. Bulletin 7320. 4 pp. Dorr-Oliver, Inc., Stanford, Conn.

Auto Grip Hanger Rings

Illustrates exclusive features and unique three-step application. Graphically illustrated with line drawings, specifications, dimension tables and list prices. Brochure Auto-Grip Div., Automatic Sprinkler Corp. of America, Jones & Brittain Streets, Youngstown 1, Ohio.

4-Way Safety Plate

Illustrates and describes three thicknesses of raised lug pattern steel plate for use as a safety flooring material and in constructing slip and fire resistant steps, stairs, ramps, column covers, platforms, skywalks, truck fenders and running boards, etc. Weights, sizes, safe loads, fabricating and installation instructions are included. 8 pp. Joseph T. Ryerson & Son, Inc., Box 8000-A, Chicago 80, Ill.

Semiconductor Power Rectifiers

Revision and expansion of the popular "Guide to Metallic Power Rectifiers" and describes power supplies utilizing Silicon and Selenium semiconductors for ac to dc applications. When requesting bulletin specify interest — industrial or electroplating. The Meaker Co., Subsidiary of Sel-Rex Corp., Nutley, N. J.

Automatic Atomizing Spray Nozzles

Gives complete information at operating pressures up to 600 psi. Installation is illustrated and described along with accessory equipment. Bulletin, #115, Spraying Systems Co., 3220 Randolph St., Bellwood, Ill.

Infrared Transmitting Materials

Reviews 15 materials, providing transmission curves and detailed properties on each. Among the properties covered are long wavelength transmission limit in microns; index of refraction; cold water solubility; soluble solutions; maximum size; and relative cost. Bulletin, 4 p. Servo Corp. of America, 111 New South Road, Hicksville, L. I., N. Y.

Use of Balsam Fir in Kraft Pulping

A report dealing with the use of balsam fir in kraft pulping is one of three new publications recently issued by the U.S. Forest Products Laboratory, maintained here by the Forest Service, U.S. Department of Agriculture, in cooperation with the University of Wisconsin.

"Sulfate Pulping of Balsam Fir," Laboratory Report No. 2225, points out that this northern softwood has long been considered excellent for use in kraft pulping, but it has not been used extensively for such pulping because of its low density, limited availability, and relatively high cost. The volume of balsam fir, however, is continually increasing, and the species is assuming greater economic importance. Laboratory studies were therefore undertaken to obtain additional data on the kraft pulping of this wood.

"Method of Determining Specific Gravity of Small Wood Chips," Laboratory Report No. 2209, details a Laboratory modification of a present standard method for determining the specific gravity of fine wood particles.

The third publication, "List of Publications on the Seasoning of Wood," Laboratory Report No. 446, provides an up-to-date file on source material that is available on this subject.

Single copies of these Laboratory publications may be obtained by writing to the Director, U.S. Forest Products Laboratory, Madison 5, Wisconsin.

Broad Picture Shows Rising Output, Increased Exports and Labor Peace

W. LeRoy Neubrech,
Ass't Director for Pulp, Paper, & Paperboard,
BDSA, U. S. Department of Commerce

Economic indicators point to a continued strengthening in demand for the products of the paper and board industry during the last half of 1961. Output for the entire year should approach 35.5 million tons, a gain of about one million tons over 1960. This upward trend in output will result in higher ratios of production to capacity not only in the remaining months of 1961 but continuing into 1962.

New Capacity Slackens

The pace of new capacity additions in paper and board manufacturing facilities will slacken in 1962 according to industry association survey data, and notwithstanding some further planned expansions in 1963, the aggregate in these two years is expected to be substantially less than in 1960-61 or in 1958-59. Consequently, the upward trend in demand and actual production should be at a faster rate than near-future increments in capacity additions. This situation should prove favorable to the economic position of the industry not only in improved production-capacity ratios but also in profit margins.

Because practically every pulp, paper, and board manufacturing company has carefully screened its operating efficiencies and overhead expenses during the past 3-4 years, higher levels in demand and output should be reflected in improved earnings.

An era of quality consciousness apparently is developing on the part of U.S. consumers for various types of goods and services. If this occurs, it could have many important effects throughout both the durable and nondurable goods industries. For the paper industry, it could mean heavier basis weights and/or upgradings in fiber furnish for many final-demand business and household products. In the field of printing and publishing, further improved qualities of coated and uncoated papers may be demanded. Also, the important area of coarse papers, especially wrappings, bag stock, and converting items, could benefit substantially from upgrading.

Selling higher quality products of the pulp, paper, and board industry would accomplish two things at the same time. First, in many instances, somewhat heavier basis weights would absorb more of the existing pulp and paper making facilities and at the same time raise the production-capacity tonnage ratios relative to the same square foot units of output. Secondly, upgraded products would be placed in a higher price bracket per square foot unit of output.

Exports Significant Help

Export market potential also adds to the increasingly favorable outlook for the U.S. pulp, paper, and board industries. Slowly but steadily exports have been accounting for a larger percentage of total production. For example, in the first six months of 1961 total paper, board and products exports amounted to about 565 thousand tons—an increase of 18 per cent over the same period in 1960—and accounted for 3.2 per cent of total domestic production.

In previous years, exports averaged only about 2.5 per cent of domestic output. Similarly, for wood pulp, exports in the first 6 months of 1961 totaled 605 thousand tons, a gain of 10 per cent over the same period in 1960, and accounted for 4.7 per cent of production, compared with an average of about 2.5 per cent in earlier years.

The greatly increased attention being given to foreign markets by domestic producers should further stimulate an expansion in exports. The mere fact that within the last two-three years a number of important domestic manufacturers have established separate export divisions substantiates this growing interest in overseas trade. Surely, as social and industrial progress gains momentum in not only the lesser-developed countries of the world but also the already progressive nations, the demand for the various products of the industry will grow rapidly. In fact, a recent United Nations report projected world consumption in 1975 to 155 million short tons, a level which is about twice the present figure. No longer does the industry think in terms only of the importance of domestic markets.

Selling abroad does involve more complexities but the same principles apply as for domestic sales. Proper marketing practices, including reliable products and services, result in steady customers. Some of the comparatively new services of the Export-Import Bank, such as guarantees covering credit risks and political risks, help to offset some of the export market uncertainties. On the other hand, the changing tariff structures and relationships, like those being brought about by the establishment of foreign trading blocs, such as the European Economic Community (EEC) and the European Free Trade Association (EFTA), creates problems in forward planning on the part of those U.S. com-

"This upward trend in output will result in higher ratios of production to capacity not only in the remaining months of 1961 but continuing into 1962."

panies looking toward long-range market development. Some U.S. companies are finding it expedient to establish overseas manufacturing plants. Some of these, as subsidiary operations, are expected to consume U.S.-produced wood pulp or primary grades of paper or paperboard.

Trend Steadily Upward

In the first six months of 1961 output of wood pulp and paper and board trended steadily upward. Wood pulp established a record high output of over 13 million tons, an increase of 2.6 per cent over the same period of 1960. Total paper and board output of 17.5 million tons failed by a very small margin to meet the level of the previous year. However, paperboard production of over eight million tons increased 1.4 per cent. Paper production, 7.8 million tons, fell by a margin of 1.1 per cent. Also, construction paper and board, at 1.5 million tons, lagged by 3.2 per cent.

Though some problems have been encountered in reaching agreements on wage levels with the labor union groups, no strikes of consequence have occurred. It appears that in most cases agreements have been or will be reached without major difficulties.

Summary of Labor Negotiations

Because labor agreements of most of the leading pulp and paper companies have their anniversary dates in the spring, negotiations are normally completed by the end of the summer.

The following summary is based on the results of negotiations conducted by the companies with the International Brotherhood of Pulp, Sulphite, and Paper Mill Workers and the United Papermakers and Paperworkers, which together represent employees of most of the major companies in the industry. Results of bargaining vary from one region to another. Hence, the following review is presented on a regional basis.

NEW ENGLAND

Wage increases follow a pattern of a flat 6-7-cent per hour, or 3 per cent with a 6-cent minimum. A number of wage adjustments were made for individual job classifications. Most agreements stipulate a reduction of 1-2 years in the service requirement for a 4-week vacation, so that many employees will qualify after 22-23 years (or 20 years in 1962) instead of 24-25 years. Fringe benefits include improvements in pension and insurance plans at most plants, and severance pay provisions at some.

MIDDLE ATLANTIC

The prevailing wage pattern appears to be about 6 cents or 2½ per cent with a 5-cent minimum. Other gains include wage adjustments and new or improved pension and insurance plans.

SOUTH

Although negotiations have not been concluded with most companies in the South, settlements may be similar to the one reached with the largest Southern Company, which often has set the pattern. This settlement provides a general increase of 3½ cents plus insurance improvements worth 4 cents. It also includes adjustments ranging from 2-15 cents on a large number of jobs, a new severance pay clause, increased pension benefits, and a fourth week of vacation after 23 instead of 25 years.

LAKE STATES

Wage increases are either flat increases of 6-7 cents, or percentage increases of 3 per cent with a minimum of 6-7 cents. In most cases, the qualification for a 4-week vacation is reduced to 20 years of service. Other gains include increases of 1-2 cents in shift premiums and improvements in pension and insurance plans.

MIDWEST

There are comparatively few mills in the Midwest area. Negotiations so far have not established a conclusive pattern.

WEST COAST

Under the Pacific Coast Uniform Labor Agreement, which sets the pattern for the West Coast, wages were increased two per cent, resulting in increases of 4-10 cents. The third shift differential was increased by three cents (from 9 to 12 cents) and the service requirement for a fourth week of vacation was reduced from 25 to 23 years. A funeral leave clause was added, and improvements were made in holiday and overtime pay.

Raw Material Inventories At Ten Year Low

John R. Mutzabaugh,
Industry Analyst, BDSA,
U. S. Department of Commerce

Low consumer inventories, increased exports, and domestic demand portend an upturn in output of the principal papermaking raw materials for the remainder of this year.

Consumer stocks of raw materials, in relation to consumption, at the end of June, were the lowest in a decade. Thus some inventory replenishment appears imminent if demand for finished paper products, stemming from the upsurge in general business activity expected in the remaining months of 1961, is to be met expeditiously.

The sole increase in June 1961 consumer inventories of raw materials over June 1960 was one of 50 per cent in pulpwood in the Western Region, which includes Alaska. Available statistics are not sufficiently detailed to pinpoint this increase but it probably is largely the result of stockpiling in Alaska.

Excluding the Western Region, yard inventories of wood averaged seven per cent below June of 1960. Mill stocks were off 26 per cent in the South Central Region and 17 per cent in the South Atlantic. Inventories in the Northeast and North Central Regions at the end of June were about the same as last year.

"Some inventory replenishment appears imminent, if demand expected in the remaining months of 1961, is to be met expeditiously."

The pulpwood stock-consumption ratio for June of this year was 1.3, about 39 days' supply, and considerably less than the 60 days' supply on hand for like periods during the last 10 years.

Stocks of Market Pulp

Consumer stocks of market pulp were down an average of 12 per cent from June of last year. Inventories were off 8 per cent at paper and board mills and 28 per cent at non-paper mills. Stocks held by paper and board mills as of June 30 were equal to 44 days' supply, much less than the 52 days' average supply for similar periods from 1951-60.

Though consumer stocks of market pulp likely will increase sharply, it is doubtful if the rise will be proportionately as great as that of pulpwood. Average supplies at the end of June for the last ten years were 52 days for market pulp and 60 days for pulpwood, indicating that purchased pulp consumers can operate efficiently on relatively lower inventories in relation to consumption than pulpwood consumers.

Waste Paper Down

Mill inventories of paper stock at the end of June were down four per cent from last year. Stock-consumption ratios in paper stock are not a significant indication of a possible consumer inventory build-up because mills have always held stocks of this product to a minimum, usually 18 to 25 days' supply. However, as the paperstock industry is building a sizable export trade, mills may consider it expedient to adopt new inventory policies to offset possible shortages such as occurred recently in some of the medium and better grades of paper stock.

Consumer inventory build-ups of raw materials seem appropriate, particularly because current trends in business activity are similar to those that occurred in 1959. At that time, as business picked up generally, paper and board production increased 10 per cent over 1958 while mill purchases of raw materials increased as much as 15 per cent, evidently the result of hasty raw material inventory replenishment by fibrous material consumers. Though no critical shortage of raw materials was evident in 1959, some tightness in supply appeared, possibly the result of last-minute ordering. Such inconvenience could be avoided by more timely, consistent inventory replenishment.

Effect of Exports

Exports of wood pulp (as noted earlier) and paperstock continued above year-earlier levels through the first half of the year, but some slowing occurred in the second quarter. Paperstock exports were 106,000 tons in the first six months of 1961, up 39 per cent over the first half of 1960, rising 48 per cent in the first quarter and 31 per cent in the second.

Despite some slowing in exports of both wood pulp and paperstock in the second quarter, shipments were still sizable. The increased export rate, together with consumer inventory replenishment and demand generated by recent improvements in general business activity, could result in raw material output increases over last year for the remaining months of 1961.

Paper and Board At Record Levels

John J. Bartosiewicz,
Program Executive for Paperboard
BDSA, U. S. Department of Commerce

The broadening economic recovery, which led the paper and board production to peak levels in the second quarter of 1961, underwrites a continuation of record output for the balance of the year. As the clinical expansion involves a larger segment of the economy, paper and board production in the second half is expected to better the 17.5 million ton figure for the first half by about one-half million tons. The industry produced 34.5 million tons in 1960 slowing output to 17 million tons in the final half in the face of the economic contraction.

By now, ascending consumption rates have boosted most paper and board grades to output levels above those prevailing at this time last year. Further progress is indicated in support of the growing need to restock depleted inventories in all channels of manufacturing and distribution.

After a relatively inauspicious first quarter, production of paper and board advanced 7.7 per cent to an all-time quarterly high of 9.1 million tons in the second quarter. Each of the three major industry product groups, paperboard, and construction paper and board, stepped up production between the second quarters of 1960-61, the heaviest gains being recorded for paperboard.

Paperboard Away Ahead

A reliable forerunner of national economic trends, paperboard production exhibited a behavior pattern typical of the early stages of an economic expansion by advancing sharply to new monthly highs from March through June. From the first to the second quarter this year, paperboard output soared 9.5 per cent, accounting for four-fifths of the total industry gain of 300,000 tons in the April-June period over the same period last year. Because of this remarkable gain, paperboard output rose to 8.1 million tons in the first half, for a modest increase of 1.4 per cent over the initial half of 1960. The paper and construction paper and board grades failed to reach the January-June 1960 levels by 1.1 per cent and 3.2 per cent, respectively, despite a sizable production upturn in May and June.

Though much of the paperboard output gain was an aftermath of a vigorous domestic demand, a good share was credited to the 45,000-ton export increase in the six-month periods of 1960-61. Paperboard exports at 282,000 tons in January-June 1961 were 19.3 per cent above the comparable period of 1960 and bettered the annual export volume recorded just 7 years ago. However, the small

"By now, ascending consumption rates have boosted most paper and board grades to output levels above those prevailing at this time last year."

2000-ton increase from the first to the second quarter this year may be indicative of an unsettled condition in the important export market. The largest U.S. linerboard export buyer, the United Kingdom, is undergoing an economic adjustment which could detrimentally affect paperboard export volume for an indefinite period.

Sanitary and Coated Lead

Paper production showed mixed tendencies in grades but reacted favorably to the business upswing, setting record monthly levels in May and June after being below comparable months of a year earlier for five months.

The small margin by which this year's second quarter edged last year's, 17,000 tons, compared to the 101,000-ton decline recorded for the first quarter, netted a loss of 1.1 per cent in the 6-month 1960-61 periods.

One of the major paper grades, sanitary tissue stock, recorded a big six per cent gain in January-June 1961 over the same 1960 period, reflecting continuing improvement in disposable personal income. This grade group, which includes such items as toweling, facial and toilet tissue, and napkin stock, is the only major paper and board grade except machine-coated paper which has not suffered a production setback over the past three economic recessions, adding tonnage annually since 1952. Foremost in the production upsurge of the sanitary tissue grade has been toweling stock, which rose 83.8 per cent between 1952-60 and was 12.9 per cent above 1960 in the first six months of this year.

The excellent production showing of sanitary tissue stock did not compensate for the sluggish performance of other grades, especially shipping sack paper, which fell 18.8 per cent in the January-June periods of 1960-61. With a noticeable improvement in the second quarter, the outlook for shipping sack paper and other grades appears more favorable as the business expansion base widens.

Construction Paper and Board Up

Construction paper and board production, at depressed levels for more than a year, reversed the trend early in 1961, recording the best March and April output in history. The resultant 5.8 per cent advance in the second quarter of 1961 over 1960 largely overcame the 12.5 per cent drop in first quarters for a net loss of 3.2 per cent in the six-month periods of 1960 and 1961. Construction papers experienced the largest gain in the April-June periods of 1960-61, rising 25,000 tons, or 7.5 per cent, while construction board added 22,000 tons for an increase of 4.6 per cent. The resumption of an expanded home building rate spurred by the availability of finance funds at lower interest rates was the key to the strong upswing in this grade during the spring quarter.

Exports Reach An All Time High

Fred Bryer,
Export Trade Specialist, BDSA,
U. S. Department of Commerce

January-June 1961 U.S. exports of pulp, paper, paperboard, and converted products rose 14 per cent over the 1960 half year mark, highlighted by a noticeably improved market and product diversification pattern, as compared with preceding periods.

The U.S. pulp, paper, and paperboard industry, while maintaining its strong position in established markets, especially Western Europe, succeeded in opening up new markets and widened its range of product distribution.

Exports to Western Europe

The rapid growth in industrial production in the six member nations of the European Economic Community (EEC), Belgium, France, West Germany, Italy, Luxemburg, and the Netherlands, continued to reflect favorably upon U.S. exports of pulp, paper, and paperboard. Strong demand for the high quality of U.S. paperboard grades for the use in the manufacture of shipping containers prevailed throughout the first half of 1961 and is expected to continue during the third and fourth quarters.

Pulp exports to the Common Market, notably shipments of bleached grades of kraft pulps, continued during the January-June period of 1961 at the same high level as in the preceding year, notwithstanding a drop in pulp orders from West Germany. Because the bulk of wood pulp shipments to the Common Market is indicative of the production of consumer goods packaging materials, predominantly in the food packaging field, it can be expected that in view of continued growth in modern retail merchandising the demand for U.S. wood pulp grades will continue and expand.

The most significant export gain was achieved in shipments to **Italy,** where rapid economic expansion opened a growing market for the U.S. pulp, paper, and paperboard industry. Italy's demands for pulp, paper, and paperboard are surging upward. With the removal of Italian restrictions on the importation of linerboard from the United States in June 1960, linerboard exports in that year jumped from 800 tons to 10 thousand tons. First six-month 1961 linerboard shipments to Italy soared to 16 thousand tons. Sizable shipments of corrugating material and new exports of newsprint paper widened the product range of shipments to Italy.

In view of Italy's per capita consumption of 62 pounds of paper and paperboard per year, which is well below the 157-pound average for the rest of the Common Market, an even greater potential exists for pulp, paper, and paperboard exports as industrialization spreads and living standards rise.

Export shipments to **West Germany** fell below last year's level because of a decline in pulp demand and a sharp drop in linerboard

orders. Sizable new shipments of corrugating material, however, mainly during the second quarter 1961, did partially offset the export losses in other grades. The shortage of skilled labor in West Germany resulted in a temporary decline in production capacity expansion but the vitality of West Germany's economy, especially accentuated by its strong industrial position in the international market, is expected to recuperate and continue strong as soon as more skilled workers are available.

The **United Kingdom,** who is now negotiating of affiliation with the Common Market, maintained and strengthened its position as the number one importer of U.S. pulp and paperboard. January-June 1961 U.S. exports of pulp to the United Kingdom were 25 per cent greater than in the first half of 1960; those of containerboard were about 10 per cent greater.

The United Kingdom's continued high level of consumption of paper and paperboard hinges largely upon the result of measures taken by its Government to improve the present economic position. Although some consumption curtailment of certain commodities will undoubtedly result from the expected economic measures, it remains to be seen whether these measures will grossly affect the consumption of paper and paperboard, which plays a vital role in industrial production.

New Markets for U.S. Output

Substantial export shipments, especially in wood pulp, newsprint paper, linerboards, and corrugating material to new markets in South America, Asia, and Africa augmented substantially the first half year of 1961 export gain of the U.S. pulp, paper, and paperboard industry. The importance of widest possible market diversification for export sales is now looked upon by industry executives as a vital segment of their export expansion program.

Exports Hit New High

Total pulp, paper, paperboard, and converted products exports in the first half of 1961 reached an all-time high of 1.17 million tons, of which wood pulp exports amounted to 607 thousand tons, up 10 per cent over the first half of 1960. Paper grade pulp shipments were 394 thousand tons, up 15 per cent, bleached and semi-bleached kraft pulp grades leading. Exports of these grades rose to 231 thousand tons and increased 18 per cent over the first half of 1960. Nearly 80 per cent of this tonnage was sold in the Western European market.

"The industry, while maintaining its strong position in established markets, especially Western Europe, succeeded in opening up new markets and widened its range of product distribution."

Special alpha pulp exports of 213 thousand tons rose three per cent over the 1960 level, despite a sharp drop in orders from Japan, largest importer of this commodity from the United States. Stepped-up efforts of U.S. producers in striving toward market expansion and diversification resulted in expanded sales to Western Europe, Latin America, and Far-Eastern markets other than Japan.

Foreign demand for waste paper continued firm thoughout the second quarter. Exports during the January-June 1961 period totaled 106 thousand tons and rose 30 per cent above the January-June 1960 level.

Exports of paper in the first half of 1961 amounted to 181 thousand tons and increased 11 per cent over the same period of 1960. Trends in the second quarter followed closely the pattern of the preceding year, newsprint sales retaining the lead. Exports of newsprint rose to 80 thousand tons, 51 per cent greater than 1960. Though fine paper exports remained at about the same level in the two periods, groundwood papers and absorbent papers rose and export of the other grades of paper fell below the first half of 1960.

Paperboard exports during the first six months of 1961 climbed to 282 thousand tons, increasing 19 per cent over the same period of 1960. Containerboard sales, comprising about 75 per cent of total paperboard exports, amounted to 214 thousand tons. Linerboard exports continued strong to Western Europe, except to Western Germany, where sales fell below the 1960 level, but significant increases in shipments to Italy offset this decline. Corrugating material sales soared to 33 thousand tons. Increased demand from established markets in conjunction with substantial shipments to new markets resulted in a gain of 171 per cent above the same period of last year.

Special food board gained 32 per cent, mainly attributable to increased sales to Canada and South America.

Exports of converted products, which rose during the January-June 1961 period 34 per cent over the 1960 level followed the trend of paperboard exports, the bulk of increase in sales being in the packaging field.

The above are from the Pulp, Paper and Board Industry Report, Volume XVII, Number 3, released in late September.

"I'll race you to the calender stack."

There's a Goulds for every pumping job in pulp and paper mills

The largest plant of its kind in the world *plus* over 100 years' experience in pump manufacturing—these equip us to meet all your pump needs for stock preparation, bleach mill, and paper mill. In addition, we can provide general-purpose pumps for mill water supply and other uses.

For complete information, contact your nearest representative or write to our main office for descriptive bulletins.

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Chicago, 10060 W. Roosevelt Rd., Westchester, Ill.

Mobile, 1873 Grant Avenue

Houston, P. O. Box 25146, 3311 W. Alabama St., Suite 110

New York, 347 Madison Ave., Room 1306

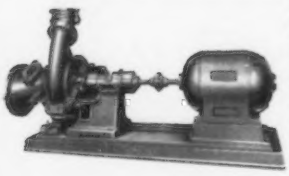
Philadelphia, 354 Lancaster Ave., Haverford, Pa.

Pittsburgh, Room 512, Bessemer Bldg., 104 6th St.

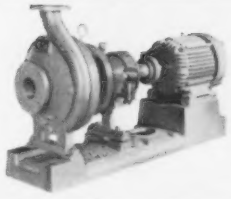
Shreveport, 1007 Petroleum Tower

Tulsa, 543 Apache St., Rm. 201, P. O. Box 6157

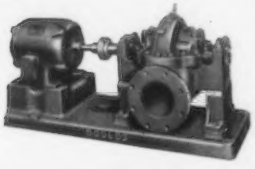
Goulds Pumps Western, Inc. — 1919 N. W. Thurman St., Portland, Oregon • **Goulds Pumps International**—11 West 42nd St., New York 36, N. Y. • **Montreal Locomotive Works, Ltd.,** MLW-Goulds Division.



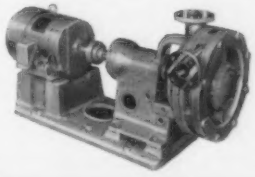
Model 3135—STOCK PUMP, single-stage paper stock pump. Centerline discharge and self-venting casing provide steady flow without binding. Non-clogging impeller with back wall ejector vanes. Twelve sizes, capacities to 6400 GPM, heads to 300 ft. Diagonally split casing saves time and effort removing rotating element without disturbing pipe connections. Ask for Bulletin 723.1. **Uses:** Paper stocks of all kinds, blowpit, bleach, broke.



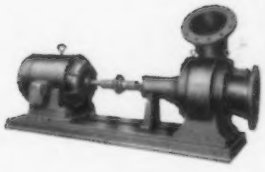
Model 3195—CHEMICAL PUMP. 11 pump sizes with same overall length, 23 in. Capacities to 775 GPM, heads to 300 ft. TDH. Working pressures to 275 PSIG. Maximum interchangeability of parts and dimensional interchangeability of models give you greatest flexibility and coverage. Standard materials: ductile iron, 316 stainless steel, Gould-A-Loy 20. Handles liquids to 500° F. Ask for Bulletin 725.1. **Uses:** Liquor recovery, bleach liquid, size-and-alum.



Model 3405—GENERAL SERVICE PUMP, single-stage, double suction pump. All sizes and pump combinations based on only 3 shaft and bearing assemblies. Mechanical seals or stuffing boxes. Rotation can be changed in field. 35 sizes, capacities to 6400 GPM, heads to 525 ft. Horizontally split casing for easy inspection, maintenance. Ask for Bulletin 721.6. **Uses:** Mill water, filtrate, fan pump, white water, centri-cleaner.

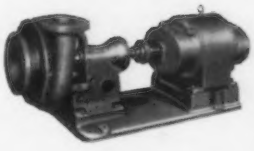


Model 3708—GOULDS-PFAUDLER GLASSED PUMP. Revolutionary new pump designed for handling corrosive liquids. All parts in contact with liquid are glass—fused to metal. Handles all acids and alkalies to pH 12. Four sizes, with capacities to 700 GPM, heads to 140 ft. Ask for Bulletin 725.2. **Uses:** Bleaching, other corrosives.



Model 3138-9—STOCK PUMP, single-stage end suction pumps. Vertically split, with discharge nozzle at 45°. Can be furnished in right- or left-hand rotation. Back pull-out design permits entire rotating element to be removed from casing without disturbing pipe connections. Externally adjustable impeller clearance. Capacities to 9500 GPM, heads up to 220 ft. Ask for Bulletin 725.5. **Uses:** Slurries or tailings, waste waters, digester circulating, bleach liquor recovery, stock handling, filtrate, bleaching, broke.

Model 3115—STOCK PUMP, vertical construction. Vertical centrifugal stock pump. Large passages allow free flow of heavy stock without air binding. Special warped vane, heavy-duty non-clogging impeller. Axial adjustment of rotating element for impeller clearance. Rotating element can be removed without disturbing pipe connections. Ask for Bulletin 723.2. **Uses:** Stock, broke.



Model 3189—STOCK PUMP, small capacity. Heavy-duty centrifugal pump available in 13 sizes with capacities up to 3000 GPM and heads to 180 ft. at 1750 RPM. Design accommodates wide interchangeability of parts. Hydraulic design provides high operating efficiency with low power consumption. Wide openings give ready access to gland and stuffing box. Ask for Bulletin 720.4. **Uses:** Filtrate, white water, size-and-alum, broke, and centri-cleaner.

MODULAR VERTICAL PUMPS

Sump. For pit depths to 20 ft. in 6 inch increments. Both wet and dry pit types available in capacities up to 3180 GPM, heads to 190 ft. Single and duplex units. Full automatic control. Modern design using standard parts permits quick shipment at most economical cost. Bulletin 726.2.

Process. Especially designed for handling corrosive liquids in the chemical process and allied industries. Normally supplied in 316 stainless steel constructions but materials to suit user's requirements can be furnished on application.

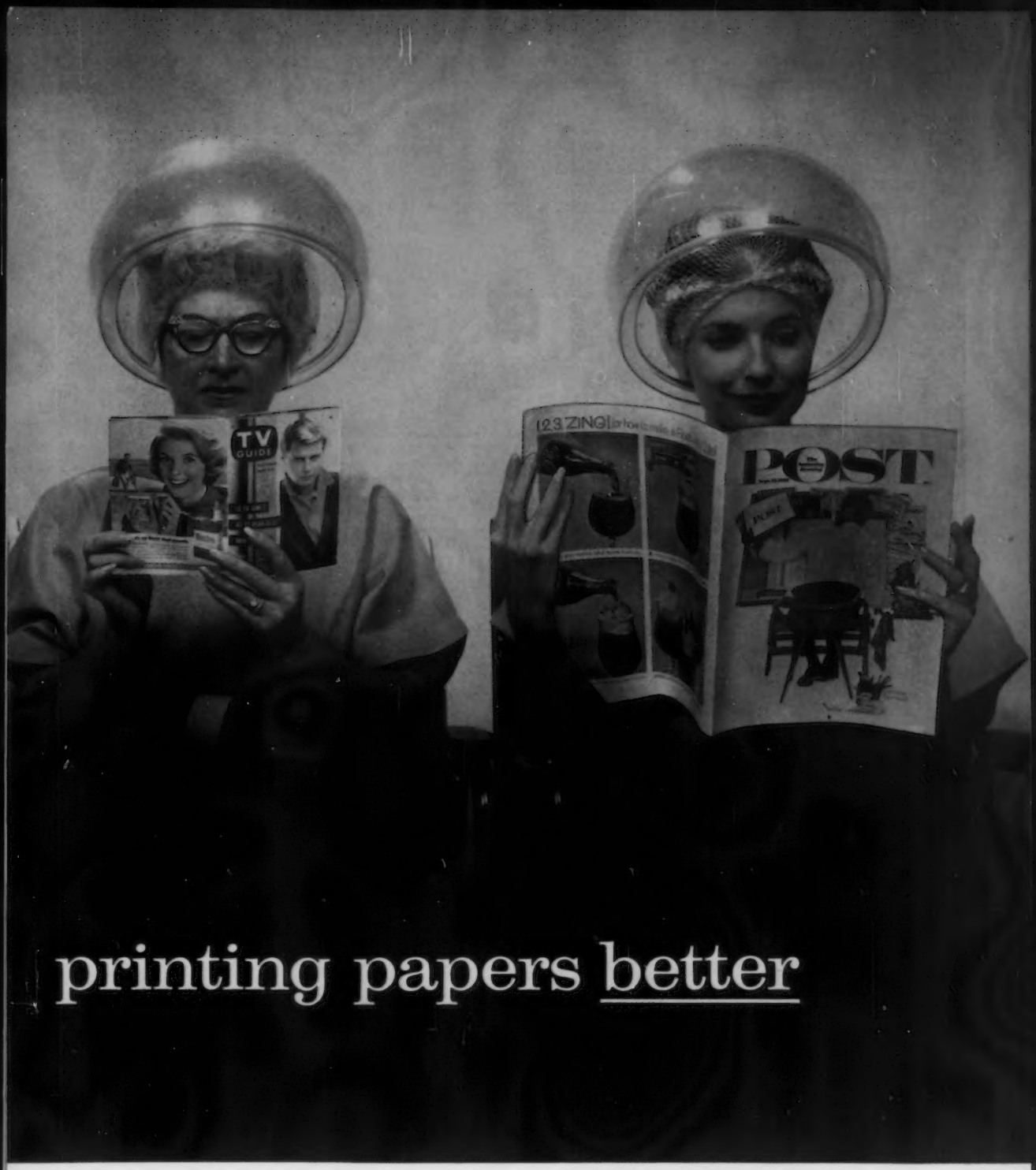
Capacities to 720 GPM. Heads to 190 ft. For heavy-duty service under most severe applications. Bulletin 727.1.

GOULDS PUMPS

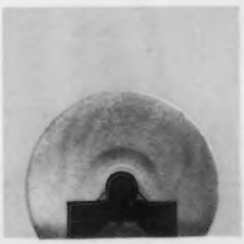
Buckeye Kraft makes good

Looking for extra bulk and tear...at lowest cost?

Modern printing requires modern papers with good bulk and high tear resistance. Buckeye Kraft excels in these qualities . . . and the advantages don't stop there. At Buckeye, the pulp industry's leading research program has resulted in exacting production techniques which assure our customers the finest long-fibered kraft. To keep it that way we invest in research more dollars per ton of pulp than any other producer. Extensive forestry planning and unmatched mill facilities have helped us produce kraft of uniformly high quality at lowest cost. If you're interested in making good printing papers better, get in touch with Buckeye... pulpmaker for many leading papermakers.



printing papers better



Buckeye Kraft

ALSO COTTON LINTERS PULP

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Highest Quality
Production-you can rely on
Thiele Kaolin
paper coating clays!
▸ Controlled Particle Size . . . .
▸ Standardized Low Viscosity . .
▸ Excellent Color . . . . . .
▸ High Brightness . . . . . .
Write for full information and sample of Thiele Kaolin coating or filler clay for your particular use.

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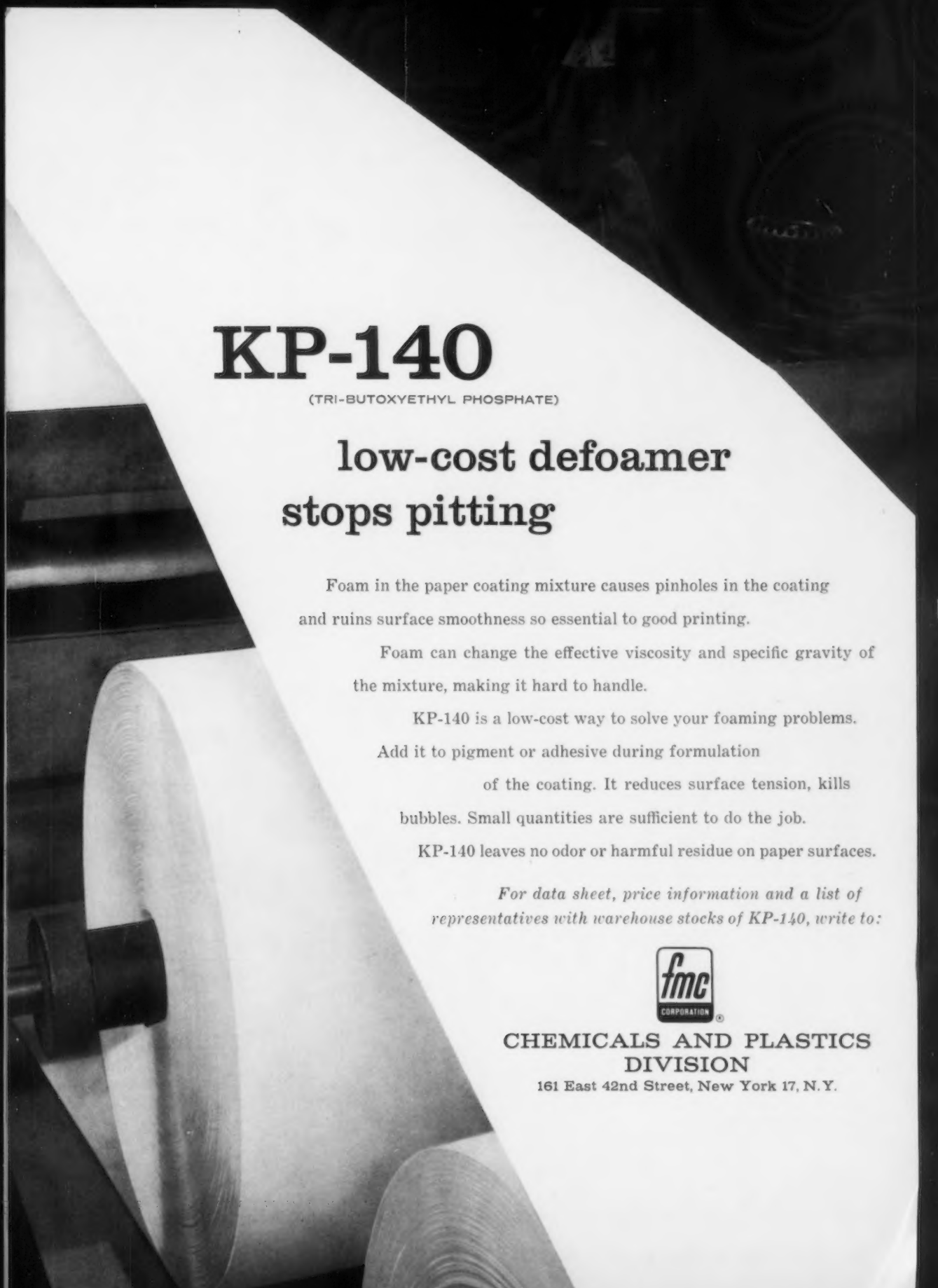


KP-140

(TRI-BUTOXYETHYL PHOSPHATE)

low-cost defoamer stops pitting

Foam in the paper coating mixture causes pinholes in the coating and ruins surface smoothness so essential to good printing.

Foam can change the effective viscosity and specific gravity of the mixture, making it hard to handle.

KP-140 is a low-cost way to solve your foaming problems. Add it to pigment or adhesive during formulation of the coating. It reduces surface tension, kills bubbles. Small quantities are sufficient to do the job.

KP-140 leaves no odor or harmful residue on paper surfaces.

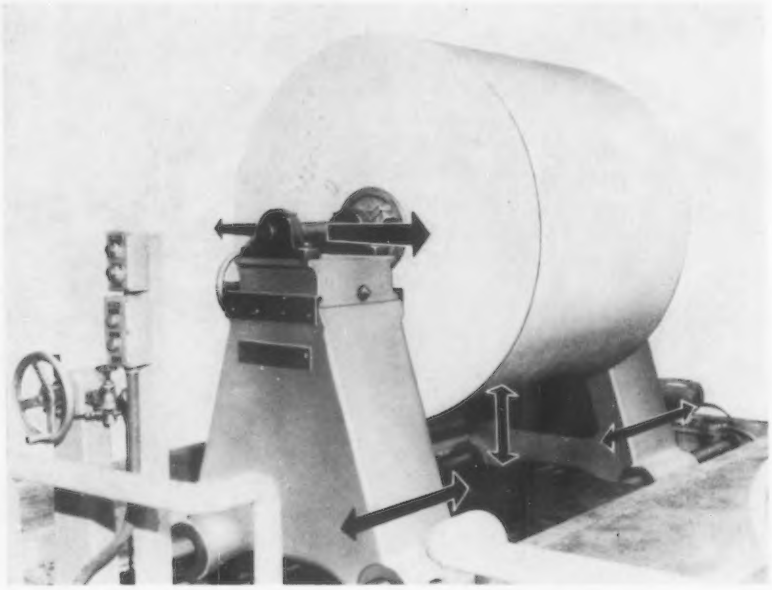
For data sheet, price information and a list of representatives with warehouse stocks of KP-140, write to:

fmc CORPORATION

CHEMICALS AND PLASTICS DIVISION

161 East 42nd Street, New York 17, N.Y.

NEW EQUIPMENT & SUPPLIES



Shaftless Backstand Speeds Finishing Operations

A shaftless backstand unit introduced by The Moore & White Co. eliminates through shafts and allows the unit to be loaded without the use of overhead cranes, lift trucks or other material handling equipment. Usually one man can easily handle the largest roll, rolling it into position between the two end stands. A hydraulic lift built in at floor level raises the roll to proper height. The two motorized side frames are then run in allowing the pneumatic chucks to engage the core.

Backstand units are provided with both cross and endwise adjustment for alignment of web. Tension can be controlled by the pneumatic braking system which also serves to completely stop the roll in the event of a paper break or shutdown of associated equipment.

Available singly or in matched sets these backstands provide highly flexible operation for a wide variety of winding, cutting, slitting, laminating and treating equipment. For example, with three backstands it is possible to run six full rolls of paper without a shutdown for loading. All three stands are loaded initially and run from the back toward the machine. As the one nearest the machine is being run out the other two are reloaded. These are again run in the same order and while the middle stand runs out the last one can be reloaded. These units may also be used for multiple web operation.

Additional units can provide even greater flexibility. Since these units are fully power controlled they can be designed to handle any width paper roll without difficulty. Even the largest rolls can be handled with a minimum of labor and without auxiliary cranes or other material handling equipment. It is claimed that in initial installations machine operators were able to handle the reloading during operation without the aid of labor crews. Moore & White Co., 330 E. Hunting Park Avenue, Philadelphia 24, Pa.

Pipe Fittings of Polyvinyl Dichloride for Hi-Temp. Uses

Production of the first full line of injection-molded fittings and flanges for hi-temp Geon thermoplastic pipe is announced by Tube Turns Plastics Inc.

The plastic is B. F. Goodrich Chemical Company's unplasticized polyvinyl dichloride, which has raised the temperature roof some 60 degrees—to 215 degrees F—for vinyl piping materials.

High-impact Schedule 40 and 80 fittings and flanges are in stock in ½- through 2-inch pipe sizes, a TTP spokesman said, and the size range will be extended to 4 inches as soon as the larger sizes of pipe become commercially available.

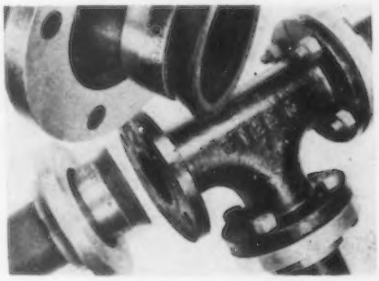
The company expects hi-temp Geon to be used extensively for process piping handling hot corrosive liquids, for hot water lines and similar applications above the temperature range of regular unplasticized polyvinyl chloride (UPVC) piping.

Chemical resistance of hi-temp Geon pipe and fittings, comparable to UPVC, includes handling strong alkalies and acids and many other corrosive liquids. The Schedule 40 pipe handles 125-pound pressure at 185 degrees F. The lightweight material is self-extinguishing and has low thermal conductivity.

Hi-temp Geon pipe and fittings are joined by solvent cemented or threaded joints, the TTP spokesman said. Tube Turns Plastics, Inc., Louisville 11, Ky.

Pipe Flange Needs No Welding, Cuts Joining Time and Costs

Pipe joining with the Eveco flange is reported to cost less and to offer other advantages as well. According



to Stamperhanger Co., installation costs are reduced up to 80 per cent; about five minutes is spent in cutting the pipe, and another five minutes for joining the pipes using the Eveco flange. No welding is required.

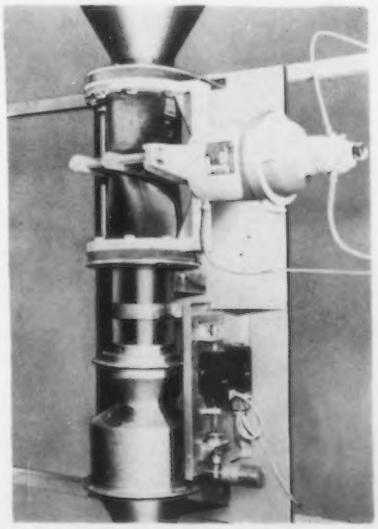
Flanges need not be pre-fabricated to pipe. Flange hole alignment and squaring is automatic upon installation. Sludge pockets and turbulence are said to be eliminated through flush, free-flow design. Flanges are never in contact with corrosive liquids, making possible their substitution for more expensive non-corrosive flanges. The Eveco flange is reusable. Stamperhanger Co., 1634 Telegraph Avenue, Oakland 12, Calif.

REEL STAND, specially designed for small volume users of steel strapping, has coil capacity up through ¾ inch x .028 mill wound coils. Model N R E is made from square steel tubing, weighs up to 10 pounds less, and features a strap guide and an adjustable friction brake. Dept. PD, Stanley Steel Strapping, division of The Stanley Works, New Britain, Conn.

Automatically Weighs and Controls Flow of Dry Materials

A continuous weighing system, with automatic control of weight, for dry-flow processes is now available from Industrial Powertronix, Inc. According to the manufacturer, the system offers a guaranteed accuracy of ±1 per cent low operating cost, easy installation in existing spouting and practically no maintenance. Use of these systems is said to allow complete automation of any dry-flow process or combination dry-flow and liquid process.

The IPI Flo-Weight Controller is a combination of a pneumatically operated pinch valve and a device called an IPI Dry-Flow Meter, which



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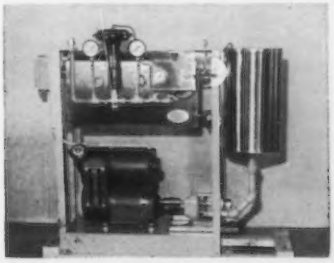
LARGE USERS OF STARCH HAVE FOUND THIS EASY TO OPERATE COOKER A VALUABLE TOOL IN LABORATORY AND MILL.

WILL COOK THE NOW POPULAR HIGH TEMPERATURE STARCHES.

YOUR TECHNICAL MEN HAVE **IDEAS** — THIS IS THE TOOL TO DEVELOP NEW AND BETTER - - -

COOKED STARCHES



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Doyle **PAPER CLEANER**

- Assures manufacture of cleaner paper.
- Removes shreds, slitter dust, etc.
- Fully automatic in operation.
- Improves quality of paper products.
- For Sheets or Webs of any size.

WRITE FOR PAPER MILL BULLETIN PM-45

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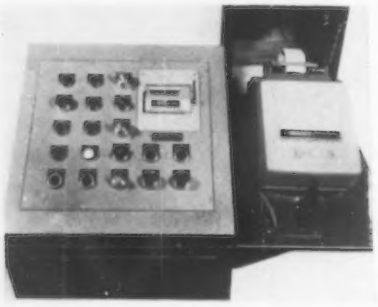
is constantly weighing the dry-flowing material. Any variation in a previously selected flow rate automatically results in a signal from the meter to the pinch-valve controller to correct rate of flow.

Flo-Weight Controllers are available to fit spout sizes from 2 to 14 inches, with capacities from 10 to 3500 lbs. per minute. Overall sizes vary from 18 x 11 x 20 inches for the 2 inch spout size to 33 x 24 x 78 inches for the 14 inch spout size.

The system is said to be corrosion- and abrasion-resistant and to have no bends or cavities for build-up of flowing materials. Also, because the system is completely enclosed, the company reports that there is no leaking of even the most dusty materials. Only 115 v., 60-cycle, 3-phase electric power and an air supply of 60 p.s.i. is required. Industrial Powertronix, Inc., 535 N. W. 11th Avenue, Portland 9, Ore.

Bulk Weighing System Auto Feeds and Totalizes

Bulk weighing systems emphasizing accuracy and fast speed of operation are announced by Toledo Scale.



Handling almost any bulk material which can be automatically conveyed, these systems can provide accurate net weights of material with up to 1 part in 4,000 accuracy, according to a company spokesman.

Multiple drafts of material are weighed and the gross and tare weights of each draft are recorded upon an automatic adding machine. Total net weights of these accumulations are always available. Fail-safe design and functional electrical interlocking assure accurate recording and results. Since the scale is read automatically, not only are human errors prevented, but also the operator is free, for the most part, to perform other duties.

Its space-saving design which can save up to 25 per cent in structural costs, say Toledo. Six models are available. Toledo Scale, Division of Toledo Scale Corp., Toledo 12, Ohio.

Prices of Fibers

MARKET WOOD PULP

THIRD QUARTER CONTRACT PRICES PER SHORT AIR-DRY TON

Delivered Basis

	U.S.	Canadian	Swedish	Finnish	Norwegian
Groundwood	$82.50/ 90.00	$82.50/ 90.00	$90.00/ —	$90.00/ —	$90.00/ —
Bleached Gw'd.	97.50/100.00	97.50/100.00			
Kraft, Blchd.	$140.00/150.00	$140.00/150.00	150.00/ —	150.00/ —	150.00/ —
Kraft, Blchd. Hdwd.	135.00/140.00		140.00/ —		
Kraft, Semi-bleached.	130.00/140.00				
Kraft, Unbl.	117.50/125.00	125.00/ —	125.00/130.00	125.00/ —	
Sulphite, Blchd.	$135.00/140.00	$135.00/140.00	140.00/ —	140.00/ —	140.00/ —
Sulphite, Bl. Hdwd.	135.00/ —				
Sulphite, Unblchd.	125.00/ —	125.00/ —	125.00/ —	125.00/ —	125.00/ —
Sulphite, Unb'l. Gl'sn.		140.00/ —	134.00/ —		
Soda, Blchd.	130.00/135.00	130.00/135.00			

‡ Depending on Brightness.

COTTON LINTERS

F.O.B. OIL MILLS PER CWT

WEEK ENDED SEPTEMBER 12

	Atlanta	Memphis	Dallas	Los Angeles
Grade 1	n.a.	n.a.	n.a.	n.a.
2	$8.00/7.75	n.a.	n.a.	$7.50/ —
3	7.75/7.00	$8.00/7.75	$7.50. 7.00	7.00/6.75
4	7.00/6.25	7.00/6.75	6.50/6.25	6.50/6.00
5	6.25/5.75	6.50/6.25	6.00/5.50	5.50/5.25
6	5.75/5.25	6.00/5.75	5.25/5.00	5.00/4.75
7	5.25/4.75	5.25/5.00	4.75/4.00	n.a.

WASTE PAPER MARKET

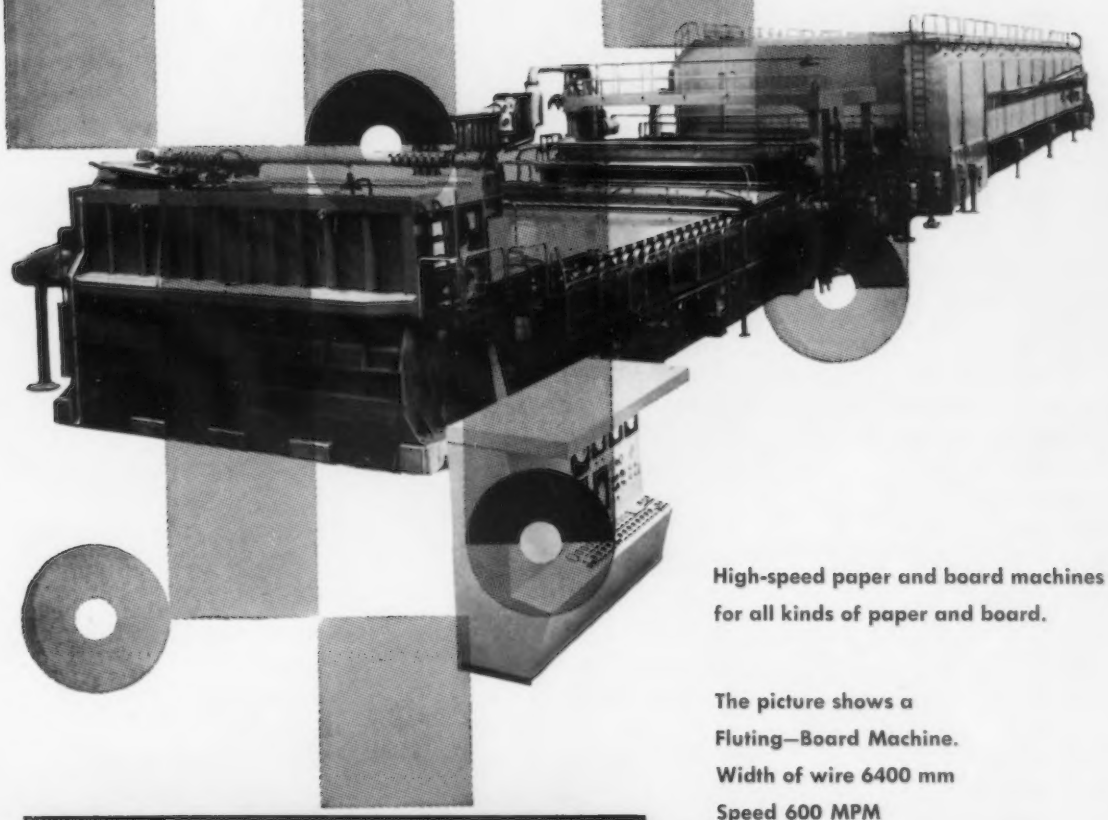
Mill Prices, f.o.b. Trucks Shipping Point — Includes Brokerage

These quotations are a partial indication of the price range on volume tonnage in each market on the date specified, as gathered from major dealers and brokers. SPECIAL PACKINGS AND SPOT TONNAGE NOT INCLUDED. Prices nominal.

	New York	Boston	Chicago	Los Angeles
	September 18	September 18	September	September
No. 1 Mixed Paper	$ 7.00/ 9.00	4.00/ 7.00	6.00/ —	12.00/ —
No. 1 News	12.00/ 13.00	11.00/ —	14.00/ —	16.00/ —
Overissue News (Lg. size)	9.00/ 11.00	9.00/ 11.00	19.00/ —	18.00/ —
Mill Wrappers	19.00/ 22.00	7.00/ 9.00	11.00/ —	13.00/ —
Old Corrugated Containers	17.00/ 18.00	18.00/ 18.50	22.00/ —	16.00/ —
Super Resorted Kraft Paper	35.00/ 40.00	— / —	33.00/ —	50.00/ —
New Double Kr. Ld. Corr. Cuts	27.50/ 30.00	32.50/ 35.00	35.00/ —	27.50/ —
(Semi-chem. medium)	45.00/ —	40.00/ 45.00	42.50/ —	— / —
New 100% Kraft Corr. Cuts	40.00/ 42.50	— / —	52.50/ —	— / —
New Br. Kraft, Env. Cuts	65.00/ 70.00	65.00/ 75.00	47.50/ —	37.50/ 40.00
New Br. Kr. Bag Waste Prntd.	50.00/ 55.00	50.00/ 60.00	47.50/ —	35.00/ —
New Br. Kr. Bag Waste Unprintd.	55.00/ 60.00	60.00/ 65.00	55.00/ —	45.00/ 47.50
No. 1 Groundwood Shvs.	25.00/ 30.00	20.00/ 25.00	13.00/ —	25.00/ —
White Newsblanks	42.50/ 45.00	30.00/ 40.00	30.00/ —	55.00/ —
No. 1 Soft White Shvs.	55.00/ 60.00	55.00/ 65.00	50.00/ —	75.00/ —
Super Soft White Shvs.	65.00/ 75.00	70.00/ 80.00	60.00/ —	— / —
Hd. White Shvs.	75.00/ 80.00	80.00/ 90.00	75.00/ —	80.00/ —
Hd. White Env. Cuts	90.00/ 95.00	100.00/105.00	80.00/ —	103.00/ —
Col. Tab. Cards	40.00/ 42.50	52.00/ 57.00	47.50/ —	35.00/ —
Manila Tab. Cards	57.50/ 60.00	65.00/ 70.00	70.00/ —	75.00/ —
No. 1 Col. Ledger	32.50/ 35.00	30.00/ 35.00	42.50/ —	23.00/ —
White Ledger	45.00/ 50.00	50.00/ 55.00	50.00/ —	40.00/ 45.00
Mixed Book & Mag.†	— / —	— / —	10.50/ —	/ —
No. 1 Books‡	15.00/ 17.50	18.00/ 22.00	27.50/ —	8.00/ 13.00

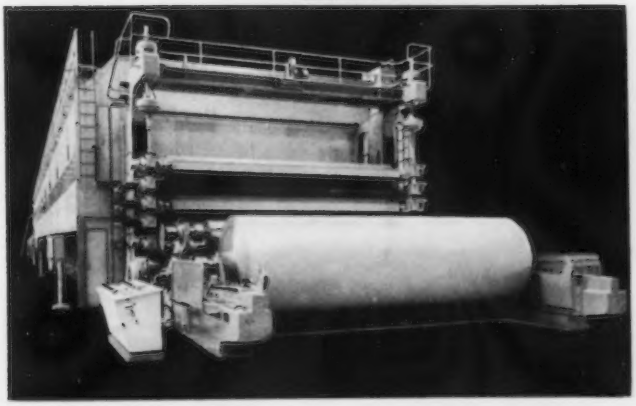
† Includes Time & Life; no coarse groundwood. ‡ Not to exceed 10% of groundwood.

Paper Machines



High-speed paper and board machines
for all kinds of paper and board.

The picture shows a
Fluting—Board Machine.
Width of wire 6400 mm
Speed 600 MPM
Production 300 metric tons/day



Tampella

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Machines for pulp and paper industry.

Maintenance of

Pulp and Paper Mill Equipment

The forty-three sections of this book represent the first effort anywhere to publish in one volume comprehensive coverage of the maintenance of most major equipment used by our industry. Each section deals with the problems of a specific type of equipment such as drum barkers, jordans, vacuum pumps, etc. The book, therefore, presents a completely different and more concrete approach than our previous publication (still available) "Pulp, Paper and Board Mill Maintenance" where the subject was discussed in the more general terms of: organization, planning, lubrication, and the specialized problems of each operating department.

Principal machinery covered in *"Maintenance of Pulp and Paper Mill Equipment"* includes:

Drum Barkers
Chain Conveyors
Chippers
Chipper Knives
Vibratory Screens
Magazine Grinders
Ring Grinders
Pulpstones
Grinder Motors
Reject Refiners
Kraft Digesters
Black Liquor Evaporators
Precipitators
Lime Kilns
Conveyor Belts
Screw Conveyors
Bleach Plants
Stock Pumps
Disk Refiners
Jordans
Conical Refiners
Centrifugal Pumps
Chemical Pumps
Vacuum Pumps
Centrifugal Screens
Paper Machine Screens
Fourdriniers
Rubber Rolls
Doctors
Paper Machine Drives
Ventilation Systems
Size Presses
Calender Rolls
Supercalenders
Slitters and Winders
Trimmers
Electric Trucks
Air Compressors
V-Belt Drives
Leather and Plastic Belts
Chimneys
Chain Drives

The section covering each item is authored by an expert from a leading manufacturer of that equipment.

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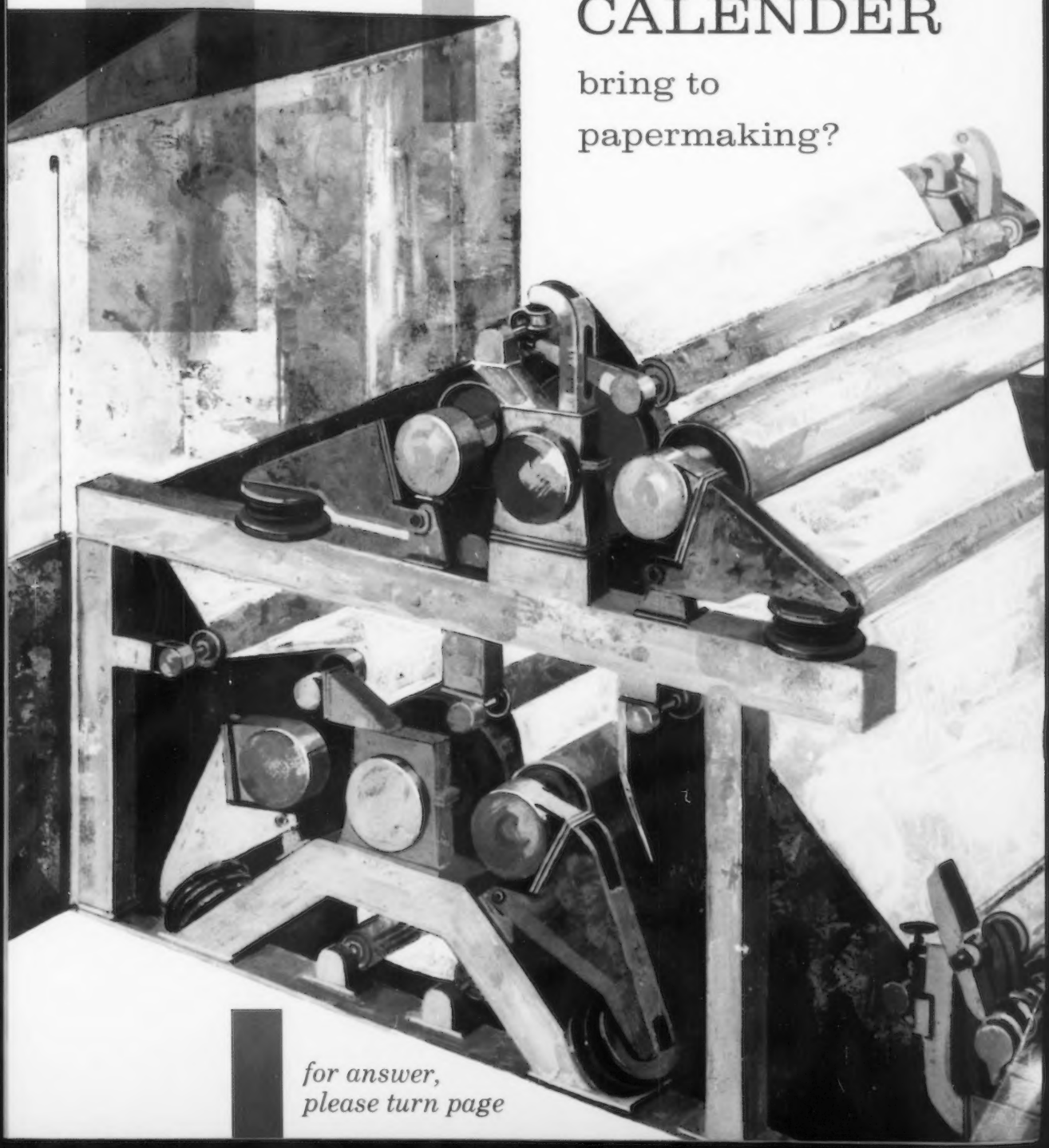
what dramatic
new developments
does the

BELOIT GLOSS CALENDER

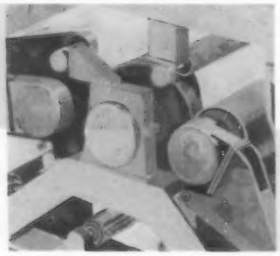
bring to
papermaking?



for answer,
please turn page

Beloit GLOSS CALENDER*

brings an improved calendering method to papermaking



While conventional machine calendering is accompanied by reduction in bulk, reduction in sheet strength, and other disadvantageous conditions, the BELOIT GLOSS CALENDER gives promise of producing equal or better finish while preserving bulk and strength.

Many intriguing possibilities are indicated for printing papers, food boards, pretreatment, and final finishing of coated papers, envelopes, and folding boxboards.

In operation, easy handling and improved machine efficiencies should result. The BELOIT GLOSS CALENDER may be used on or off the machine.

*U.S. and Foreign Patents Pending

BELOIT IRON WORKS PAPER MACHINERY BELOIT, WIS. U.S.A.

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PAPER MACHINERY

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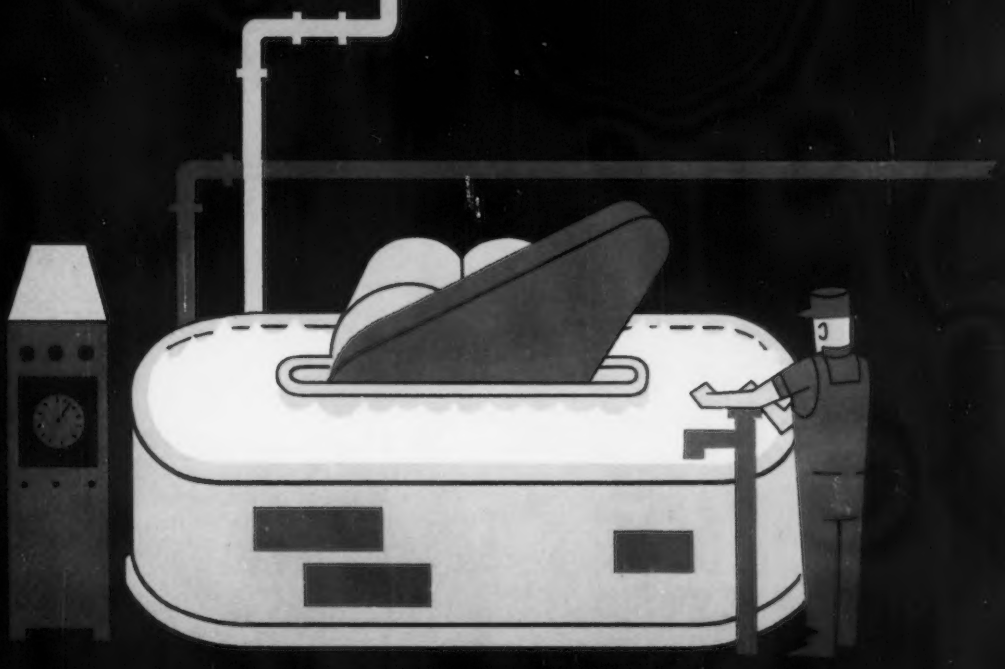
TITANIUM DIOXIDE



Designed specifically for wet-end additions, UNITANE 0-120 insures unmatched retention in adverse beater conditions, yet offers the same high opacity and brightness as other UNITANE pigments.

If you're having retention problems, ask your Cyanamid Pigments representative about UNITANE 0-120.

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AMERICAN CYANAMID COMPANY Pigments Division

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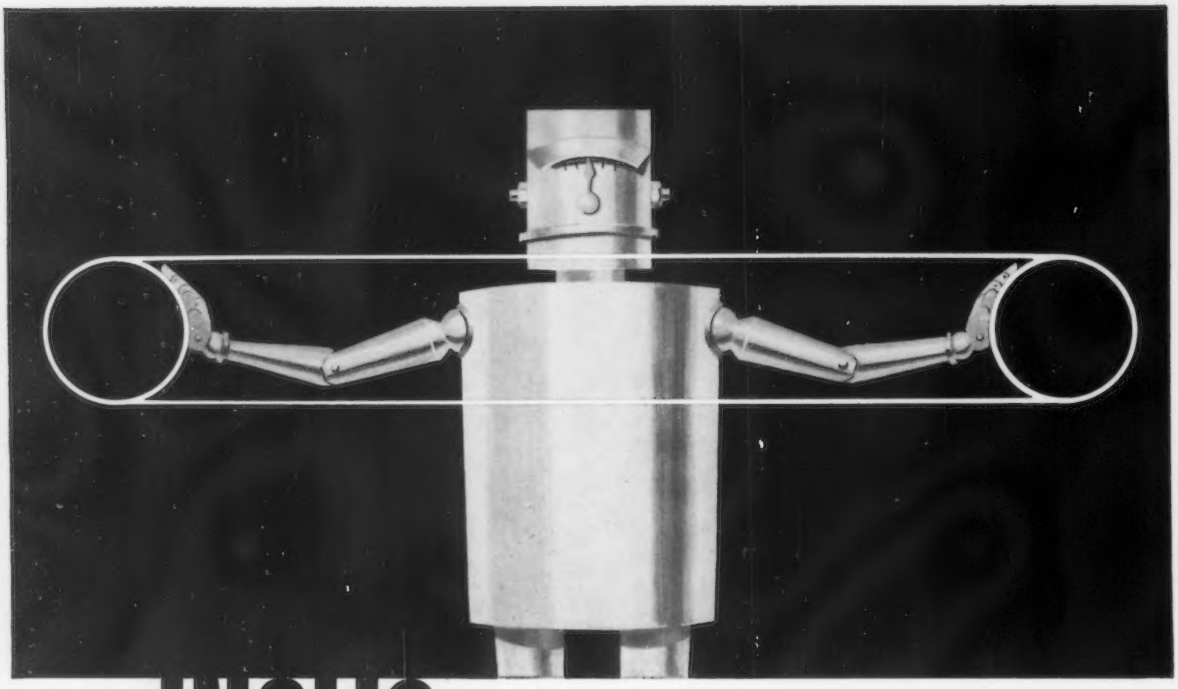

INGLIS WIRE TENSION DEVICE

. . . lengthens wire life through automatic control

The newest Inglis contribution to better paper making takes the business of wire tension adjustment out of human hands—maintains the appropriate uniform tension automatically. The device lengthens wire life by compensating automatically for natural stretch, and by positively eliminating the danger of damage from overtension in a wire cooling after hot stock is removed. When required, easy manual changes can be made, allowing the paper maker to use his judgment in selecting the best tension for different wires. Tension settings may be recorded for later reference.

From head box to winder, paper machinery by Inglis is designed and built to keep the modern paper maker in step with modern production demands.

For full details of the Inglis Wire Tension Device, write for publication P.P. 604.

Inglis

PAPER MAKING MACHINERY

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Sales and Service throughout Canada and the U.S.A.

How Texaco's new "Stop Loss" program helps cut uneven caliper and other losses

Texaco's new "Stop Loss" Program pays particular attention to dryer roller bearing lubrication. As a result, the danger of uneven caliper because of improper bearing operation is minimized. Careful attention is also given to other paper mill problems such as wet end lubrication and water contamination.

Maintenance costs cut up to 10%. A "Stop Loss" Program can cut your maintenance costs by as much as 10%. In turn, these savings can increase your net profits by as much as 8.8%.*

How a "Stop Loss" Program works. Basically, a "Stop Loss" Program is concerned with modernizing and controlling lubrication practices—from purchasing right through actual application.

Professional Texaco lubrication engineers help specify the right lubricant and lubrication interval for every piece of equipment—from woodyard to machine shop. Lubrication responsibility is delegated...a workable system of lubrication control is set up.

As a result, your equipment runs better...lasts longer...delivers a consistently uniform product with minimum downtime. Other "Stop Loss" benefits include reduced lubricant inventories and purchasing costs.

For full details on how a "Stop Loss" Program can fit into your operation and earn dividends for you, write: Texaco Inc., 135 East 42nd Street, N. Y. 17, N. Y., Dept. PT-52.

*The U. S. Department of Commerce estimates that a paper mill doing a $10,000,000 yearly business will spend about $650,000 for maintenance. A 10% reduction in maintenance costs would amount to $65,000. Assume that profits average 7.34%—or $734,000. By adding the 10% maintenance saving, profits now total $799,000...an 8.8% increase.

Tune In: Texaco Huntley-Brinkley Report, Mon. Through Fri.-NBC-TV

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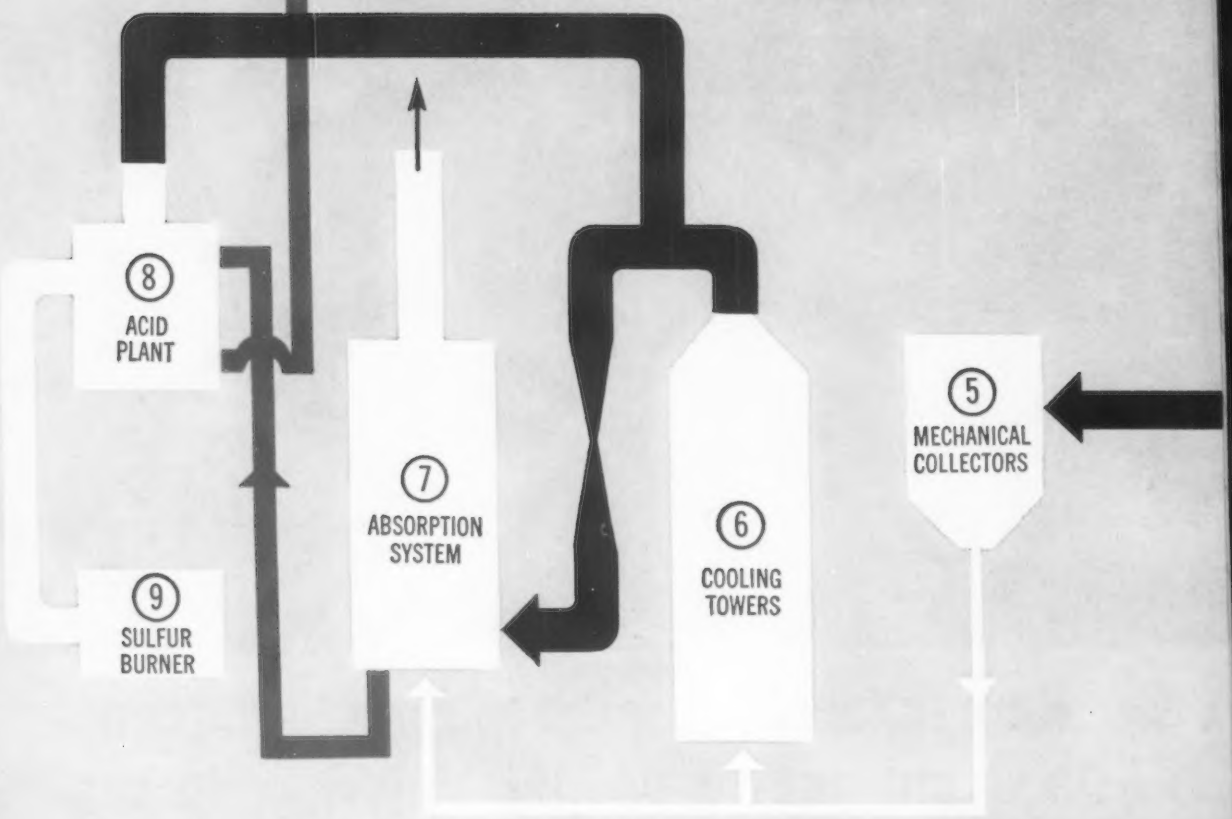
LUBRICATION IS A MAJOR FACTOR IN COST CONTROL

MgO pulping and recovery process. Pulp wood chips are digested in magnesium bisulfite liquor (1) pulp is withdrawn and washed (2) and knots removed. Liquor with 10 to 15% solids is passed through multiple-effect evaporators (3) to raise the solids content to 55% before burning in recovery boilers (4) to produce steam at 860 psi and 825 F for power generation and processing. MgO and SO_2 are released from the liquor during the incineration process. MgO is recovered in mechanical collectors (5) while the SO_2 and flue gases pass to the cooling and absorption towers (6). Recovered MgO is hydrated and introduced into the acid circulating to the absorption system (7). Here it combines with SO_2 to form magnesium bisulfite acid. The cycle is completed by fortifying the recovered magnesium bisulfite acid (8) with sulfur dioxide from the sulfur burner (9).

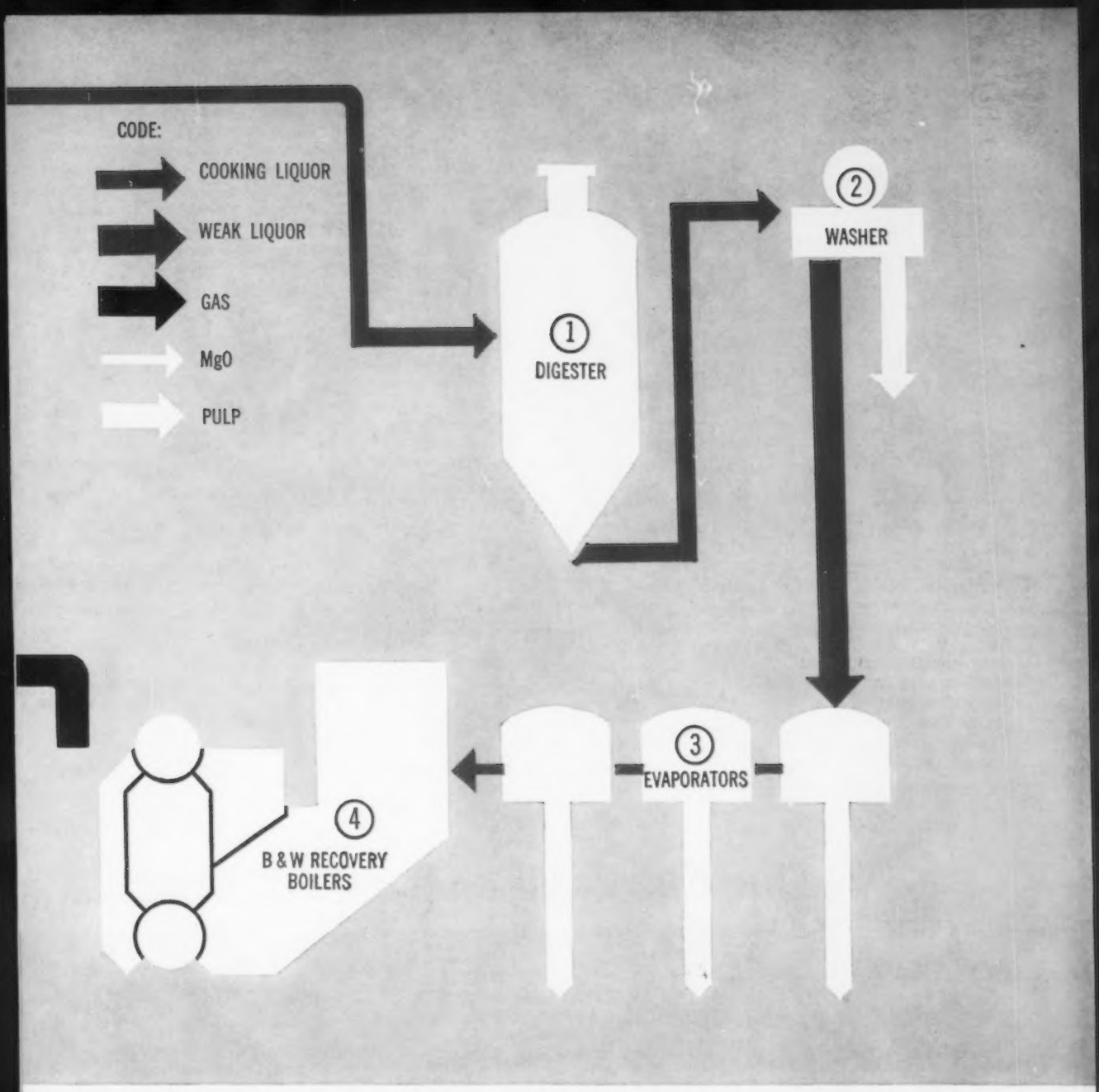


MgO process at Weyerhaeuser's Cosmopolis

Evaporators in series increase pulping liquor from less than 15% to about 55% solids to permit its burning.

B&W MgO recovery boilers burn the concentrated liquor, supplying 70% of the plant's steam requirements.

Mechanical collector reclaims MgO from furnace flue gas and washes it before further use.



Mill recovers 90% of spent liquor solids

Only 20 pounds of magnesium oxide and 40 pounds of sulfur per ton of unbleached pulp are needed for make-up at Weyerhaeuser Company's 400 ton per day sulfite mill at Cosmopolis, Washington.

The simple, closed cycle MgO pulping and recovery process, placed in operation during 1957, reclaims about 90% of the pulping chemicals. The B&W MgO recovery boilers provide 70% of the steam required for the entire plant's power generation and processing needs. A third B&W bark and oil fired boiler provides the balance of steam requirements.

The commercially-proven MgO pulping and recovery process is ideal for either new mills or conversion and modernization of existing mills. Shorter cooking time required for MgO pulping cuts capital and maintenance costs in new installations and permits increasing the production of existing mills. Quality sulfite pulp with high brightness and strength is produced.

For more information about the efficient MgO pulping and recovery process, contact your nearest B&W sales office or write The Babcock & Wilcox Company, Boiler Division, Barberton, Ohio. E-302-1001

Babcock & Wilcox

PJT NEWS OF SUPPLIERS

W. S. Bunte

R. W. Marshall

Frank W. Egan & Co. has appointed William S. Bunte to the staff as a sales engineer. Mr. Bunte is former manager of Riegel Paper Corp., Paterson (N. J.) plant. He will specialize in the sale of extrusion coating equipment with the Egan firm. He was associated for 12 years with Union Carbide Plastics Co. before joining Riegel Paper.

W. E. Greene Corp., New York, has announced that Richard W. Marshall has joined its organization as marketing manager.

Mr. Marshall will assist in sales administration of Lodding Engineering Corp. doctors and rubber-covered rolls manufactured by Stowe-Woodward, Inc. His previous experience has been with the Crane Co.'s Industrial Products, in sales and sales management, and most recently as district manager, northeast.

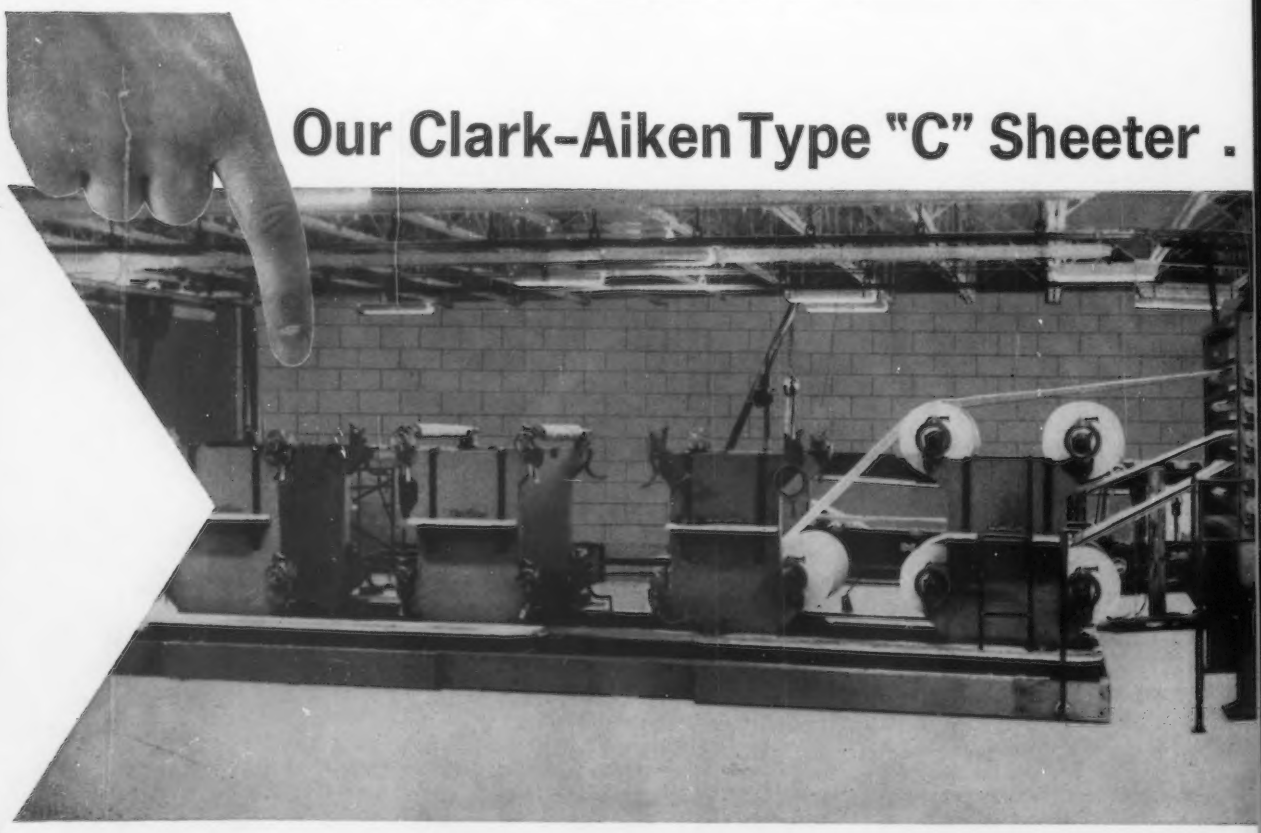
Minerals & Chemicals Philipp Corp., Menlo Park, N. J., has appointed William H. Somers as Midwest Regional sales representative and reassigned W. E. Welliver to Western Regional sales representative for the Paper Sales department.

Mr. Somers will assist O. W. Callighan in Michigan, and will also serve MCP's customers in Ohio, Indiana, Illinois, and Tennessee. Mr. Welliver will represent MCP in Wisconsin, Minnesota and on the West Coast.

Mr. Somers is a graduate of Western Michigan University where he majored in pulp and paper manufacture. Prior to that he completed a four-year tour of duty with the U.S. Air Force. A native of Kalamazoo, Mich., he was formerly associated with the Coatings Technical Service department of Dow Chemical Co., Midland, Mich. Before establishing his headquarters in Kalamazoo, he will spend four months of intensive training at both MCP's McIntyre, Ga., plant and its Menlo Park, N. J., Research Laboratories.

W. H. Somers

W. E. Welliver



Minerals and Chemicals Philipp produces paper coating and filling clays which they market throughout the world, and offers technical sales and service, in principal paper production centers throughout the United States and Europe.

J. M. Huber Corp. announces that Robert W. Shaw has joined the Technical Service Group of the

R. W. Shaw

R. A. Deweir

firm's Industrial Products Department, located in Huber, Ga.

Mr. Shaw will be available to assist paper mills in their use of Huber clays, carbon blacks and Zeolex pigments in the manufacture of paper.

A graduate of West Michigan University, Mr. Shaw was formerly associated with R. T. Vanderbilt Co. and Hammermill Paper Co.

Central Ohio Paper Co., has opened its Eastern Division, with offices in Washington, D. C. under the management of vice-president Raymond A. DeWeir. The Central Ohio Paper Company is one of the oldest paper merchants and manufacturers of envelopes and paper products in the United States.

Raymond A. DeWeir was formerly the president and general manager of the Stanford Paper Co., which he joined in 1942. At that time Mr. DeWeir developed one of the largest government sales departments in the industry. In 1946, he was elected vice-president of the firm and in 1951, assumed the additional responsibilities of general manager. In May of 1958, the Board of Directors elected Mr. DeWeir to the position of president and general manager.

The Eastern Division is now in operation with offices at 100 Indiana Ave., N. W., Washington 1, D. C.

Aer Corp., 34 N. Spruce St., Ramsey, N. J., will specialize in design and installation of air application equipment for any aspect of pulp or paper processing. William K. Metcalfe, president announced the formation of a new corporation serving

Aer Corp. Officers; Standing, l. to r. are: William Metcalfe; Kenneth Jones; and Robert Grott. Seated are: Charles Guischard; George Etzel.

the pulp and paper industries.

Mr. Metcalfe, a registered engineer, president of Aer Corp. was formerly vice president, marketing, of J. O. Ross Engineering Division, Midland-Ross Corp., New York City. He was with J. O. Ross for over 25 years, holding such positions as sales engineer covering the Eastern states, secretary of J. O. Ross Engineering Corp. and, later, director and vice president, sales. Asked about the first work Aer Corp. would perform, Mr. Metcalfe said: "We are immediately ready to perform service in

"Has exceeded all expectations," says . . .

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"WE ARE VERY PLEASED WITH THE RESULTS OBTAINED FROM OUR NEW CLARK-AIKEN SHEETER. THIS INSTALLATION HAS MORE THAN DOUBLED THE CAPACITY OF OUR NEWLY-REMODELED FINISHING ROOM AND HAS PROVED SATISFACTORY IN EVERY WAY. IT HAS EXCEEDED OUR EXPECTATIONS."

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three areas: One, to assist in surveys of any air application equipment for plant modernization; Two, to work on air requirements for any new plant; Three, to prepare proposals on any air system . . . offering our complete engineering, fabrication and installation services."

In formation of Aer Corp., Mr. Metcalfe is joined by four associates: Kenneth Jones, vice president and sales manager; George Etzel, secretary and director of purchases; Robert Grott, treasurer and director of engineering; Charles Guischard, assistant secretary and regional sales manager.

Messrs. Jones, Etzel, Grott and Guischard are also former employees of J. O. Ross Engineering. Mr. Jones most recently held the position of district sales manager handling the Middle Eastern and Southern States; Mr. Etzel was director of purchasing; Mr. Grott was chief engineer of paper mill products; and Mr. Guischard was sales engineer for the Middle Eastern States.

Pennsylvania Industrial Chemical Corp. has promoted Ronald Neubert to general production manager over plants in Clairton, West Elizabeth, and Chester, Pa.

Mr. Neubert, a 15-year employee with PICCO, has progressed to his present position through maintenance engineer, supervisor of maintenance and chief process engineer in the Clairton plant.

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Figures of the Week

PAPER PRODUCTION RATIO REPORT—American Paper & Pulp Assn. Figures

(Production as per cent of normal capacity)

COMPARATIVE WEEKLY SUMMARIES

	Aug. 12	Aug. 19	Aug. 26	Sept. 2	Sept. 9
1961	90.8r	91.6r	91.3r	89.1r	67.9
	Aug. 13	Aug. 20	Aug. 27	Sept. 3	Sept. 10
1960	91.7	93.0	94.4	90.1	73.1

r Revised.

COMPARATIVE MONTHLY SUMMARIES

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1960	96.5	97.7	98.1	96.9	97.6	96.1	81.2	91.7	89.1	94.8	92.0	80.2	92.7
1961	87.9	90.0	91.2	91.2	91.6	91.3	78.0	90.4‡					

‡ Preliminary.

COMPARATIVE YEARLY SUMMARIES

	1954	1955	1956	1957	1958	1959	1960	1961
Year to Date	91.2	95.2	98.2	91.1	85.9	91.6	93.9	88.7
Year Average	91.6	96.2	97.9	90.4	87.0	92.0	92.7	

All of the above data is based on tonnage reported to American Paper and Pulp Association. Does not include mills reporting to National Paperboard Association, except in isolated cases where both paper and paperboard are produced and separate tonnage figures are not readily available

PAPERBOARD OPERATING RATIOS†—National Paperboard Assn. Figures

COMPARATIVE WEEKLY SUMMARIES

	Aug. 12	Aug. 19	Aug. 26	Sept. 2	Sept. 9
1961	94	94	95	96	76
	Aug. 13	Aug. 20	Aug. 27	Sept. 3	Sept. 10
1960	92	92	92	94	70

COMPARATIVE MONTHLY SUMMARIES

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1960	92	95	94	93	94	92	78	94	88	93	86	73	89
1961	88	89	92	91	92	95	78	95					

† *Per cents of operation based on "inch-hours" reported on a 6-day basis to the National Paperboard Association.*

SUMMARY OF PAPERBOARD STATISTICS—National Paperboard Assn. Figures

ITEM	WEEK ENDING Sept. 2, 1961	WEEK ENDING Sept. 9, 1961	CUMULATIVE TO DATE January 1, 1961 to September 9, 1961
% Activity	96%	76%	90%
Total	337,806	261,790	11,186,215
Containerboard—Domestic Use	176,993	135,379	5,705,416
Liner	118,877	90,873	3,811,908
Corrugating Material	52,874	40,276	1,721,803
Chip & Filler Board	5,242	4,230	171,705
Boxboard—Domestic Use	98,600	75,885	3,400,566
Folding	59,233	47,330	2,033,331
Set-Up	10,872	9,906	328,442
Special Food Board	28,495	18,649	1,038,793
Other Paperboard	62,213	50,526	2,080,233
Containerboard Type	28,078	23,420	1,002,401
Boxboard Type	34,135	27,106	1,077,832
Total Orders			
Received	342,341	286,818	
Unfilled End of Week	521,301	549,084	

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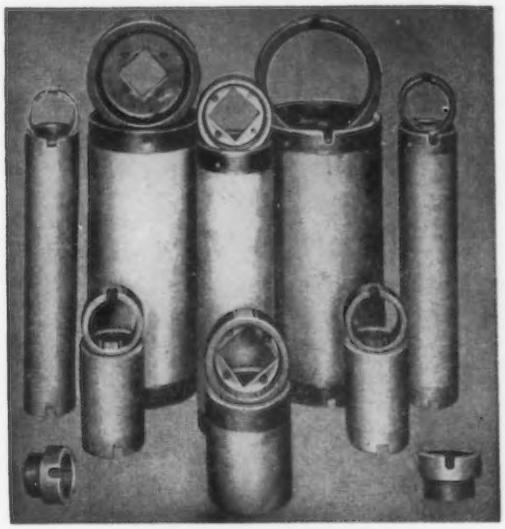

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Middletown, Ohio

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Is required by British Columbia Forest Products Limited for a 350 ton, high speed, single machine newsprint addition to their bleached kraft market pulpmill at Crofton, B. C., on Southern Vancouver Island. The candidate should have previous experience on high speed newsprint, and in addition, be familiar with groundwood production, preferably from western woods.

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MILL MANAGER

BRITISH COLUMBIA FOREST PRODUCTS LIMITED

CROFTON, B.C.

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1—4 roll 72″ face (Extra heavy duty).
1—5 roll 86″ face.

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1—96″ Murray 4 knife Chipper—anti-friction bearings.
1—84″ 10 knife Carthage Chipper. Anti-friction bearings, with motor.

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1—27″ High Solid Coater.
1—42″ Chapman Extrusion Type Coater.

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6—18″ diameter x 138″ face

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1—Murray Chip Crusher.
1—Williams Hammermill.
1—Jeffrey Shredder.

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5—36″ diameter x 75″ face, with couch rolls.
1—36″ diameter x 82″ face.
1—42″ diameter x 96″ face.
2—42″ diameter x 106″ face.
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DRIVES

1—Jones 21 H.P., ratio 10 to 1 (enclosed angle drive).
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1—28″ diameter x 84″ face.
1—28″ diameter x 48″ face.
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22—28″ diameter x 62″ face, with frames, Gears & Bearings.
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29—48″ diameter x 109″ face, complete section
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1—57″ 3-roll Embossing Calender.
1—62″ 2-roll Embosser.
1—90″ 2-roll Smoothing Calender.

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1—Oliver, 10 ft. face x 5½ ft. diameter.
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1—Oliver Filter, 8 ft. x 8 ft.
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1—12 Plate "Packer".
4—14 Plate IMPCO, bronze vats.

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2—#1 Jones High Speed Jordans, Stainless steel tackle, A-F. Bearings, motors.
1—#1 Jones High Speed Jordan.
1—Jones Standard, new spare tackle, with 75 h.p. motor.
1—Noble & Wood Mammoth Jr., with spare plug.
1—Noble & Wood Baby Jordan, anti-friction bearings, with 20 h.p. motor.
1—#6 Miami, anti-friction bearings.

KNIFE GRINDER

1—70″ Seybold.

LABORATORY EQUIPMENT

1—Washer for 5 lb. Beater.
1—24″ Saveall, stainless steel.
1—20″ Fourdrinier Wet End & Press Section.
1—Noble & Wood Cycle Beater with motor & stand.
1—Williams Freeness Tester.
7—Mullen Testers, motorized & hand operated.
1—2 qt. Auto Clave. Stainless Steel.
1—27″ High Solid Coater.
1—Noble & Wood Baby Jordan, anti-friction bearings, with 20 h.p. motor.
2—Emerson, Jr., No. 1 Jordans, anti-friction bearings.
1—24″ diameter x 24″ face Stainless Steel Cooling Drum.
1—10″ x 12″ Valley Iron Works Flat Screen with drive & motor.

MISCELLANEOUS

1—Shartle Hydrafuge, 1000 g.p.m. (with motor).

MOTORS

4—25 h.p. Westinghouse, totally enclosed, ball bearing. 705 r.p.m.

PAPER MACHINE

1—110″ Fourdrinier Paper Machine

PRESSAFINER

1—7″ Pressafiner, stainless steel construction, New 1955, with new spare motor.

PRESS ROLLS

2—Chilled iron, chrome plated 9″ x 72″.
1—Chilled iron, chrome plated 10″ x 74″.

PUMPS

1—Economy Fan Pump 6000 g.p.m., 20′ head, 50 h.p. motor.

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1—72″ Downingtown Reel, 2 bowl.
1—84″ 3 bowl revolving reel.
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1—100″ Rice Barton 2 bowl Reel, heavy duty.
1—116″ Downingtown, 2 bowl, anti-friction bearings.
1—123″ 3 bowl Revolving Reel.
1—130″ Pope Reel (Rice Barton).
1—134″ 2 Drum.

REFINERS

1—Rice Barton Dynofiner, details on request.
1—12″ Wiener Refiner, with 200 h.p. motor.
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2—Taylor Stiles Rag Cutters.

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1—42″ Cameron Type 40-2.
2—50″ Cameron Type 6.
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1—Sandusky 18″ x 144″ face.

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1—Gilbert & Nash 122″ face.

SUCTION PRESS ROLL

1— Sandusky 18″ dia. x 138″ face Suction Press Roll.

SUPER CALENDER STACK

1—7 Roll 70″ face.

TOILET WINDERS

1—72″ Hudson-Sharp (Surface type winder).

TRIMMERS

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1—95″ Seybold Trimmer, Model 15ZJ.

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1—#4 Nash Hytor.
1—#7 Nash Hytor, with 75 h.p. synchronous motor.
1—H-7 Nash.
2—K-5 Nash.
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1—L-6 Nash.

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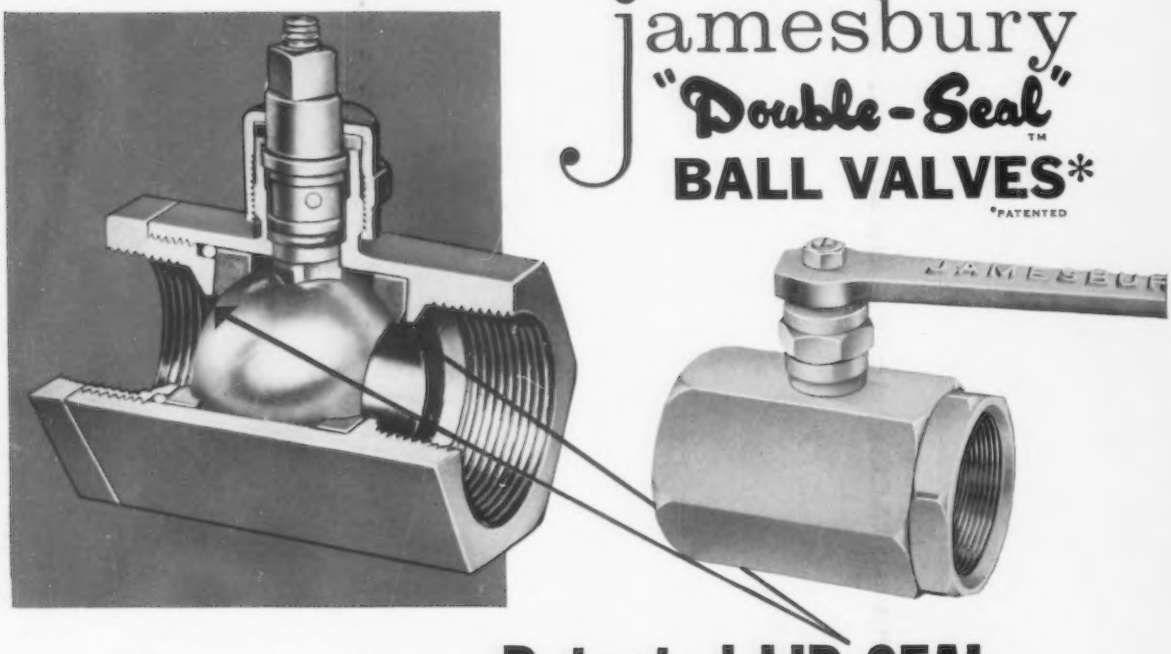

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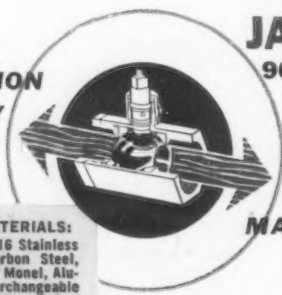

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